

BREASTSCREEN AOTEAROA
INDEPENDENT MONITORING REPORT:

SCREENING AND ASSESSMENT REPORT OF WOMEN ATTENDING BSA
(WOMEN SCREENED JULY 2010 TO JUNE 2012)

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EXECUTIVE SUMMARY

This report presents cross-sectional data for the period January-June 2012 (6 months) and July 2010 to June 2012 (2 years), and trend data from programme inception to June 2012 for all BreastScreen Aotearoa screening and assessment indicators. Treatment indicators are located in a companion report. 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 until a new time-series was established for the expanded 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. Both the magnitude of differences, and their statistical significance, are used to assess the relation of observed to target values. Differences of <5% in magnitude from the target value and/or differences which are not significantly different from the target value are considered 'on target' (see 'Technical notes for interpreting this report').

As the BSA screening programme matures the proportion of visits for initial screening diminish and the proportion of subsequent visits increases, and the age profile of new entrants to the programme becomes younger. 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 (see 'Technical notes for interpreting this report').

Since the previous report, the extraction code has been entirely re-written which has also involved review of the logic implied by the business rules. This has led to some fluctuation in a few indicators.

1. Coverage

BSA screened 125,125 women aged 45-69 years over the 6-month period from January to June 2012, of which 94,988 were aged between 50 and 69 years. For women in this age group, the biennial participation of 70.4% achieved the target of 70%. Of biennial screens, 8.2% were initial screens and 91.8% 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. (Table 1.a.1, Figures 1.a.1, Table 1.a.2, Figures 1.a.2).

For women aged 50-69 years, significantly lower biennial participation was evident for the eligible Māori population (63.5%) and Pacific populations (69.0%), compared with the remaining ethnic groups (71.2%). However, biennial coverage in Māori and Pacific groups continues to show a sustained increase over time. BSWN, BSCM and BSSL were on target for Māori coverage, and BSWN, BSAL, BSCtoC, and BSHC were on target for Pacific coverage. Only BSWN was on target for both Māori and Pacific groups. (Table 1.a.7.a, Figures 1.a.7.1).

BSSL (79.4%) and BSHC (73.0%) continue to exceed the biennial coverage target of 70%; BSSL has consistently had higher biennial coverage relative compared to other lead providers. Biennial coverage for BSC, BSCtoC, BSWN and BSHC continue to increase and are on target. There are now 5 Lead Providers (of 8) on or above target for overall coverage. (Table 1.a.1, Figures 1.a.1, Table 1.a.2, Figures 1.a.2).

Re-screening proportion and timeliness

The calculation of the indicator for re-screening within 27 months since the previous screen is still under re-assessment and is not provided in this report.

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 2.9% (target <5%) for subsequent screens. The 2 year referral to assessment rate for

initial screens was significantly above the target range of <10% for BSWN (12.7%), and BSCM (11.0%). (Table 2.d.1, Table 2.d.2, Figures 2.d.1, Figures 2.d.2).

False positives and positive predictive value

The proportion of false positives for women aged 50-69 years for the 2-year period was 8.3% for initial screens (target <9%), and 2.3% for subsequent screens (target <4%). The positive predictive value (PPV) for the programme for the 2-year period was 12.1% for initial screens and 18.9% for subsequent screens, for women aged 50-69 years. (Table 2.e.1, Table 2.e.2).

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 a satisfactory level trend overall. Technical recall rates for mobile sites also achieved the target of <3% for BSA overall for the 2-year period, but significantly exceeded the target value for BSAL, BSM, and BSCtoC. (Table 2.b.1, Table 2.b.2, Figures 2.b.1, Figures 2.b.2).

3. Early detection of DCIS or invasive breast cancer

DCIS and invasive cancer detection rate

A total of 530 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 5.3 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 11.8 per 1,000 for initial screens and 5.5 per 1,000 for subsequent screens. This represented 2,107 cancers detected through BSA for the 2-year period (Table 3a2). Trends in cancer detection for initial and subsequent screens have remained relatively stable across Lead Providers, although increasing trends are evident for most Lead Providers for initial screens with the exception of BSC and BSSL, and increasing trends for subsequent screens for BSCM, BSM and BSHC (Figure 3a).

The proportion of DCIS of all cancers for women aged 50-69 over the biennium was 20.7%, ranging from 14.5% to 30.4% across Lead Providers (Table 3e). The proportion of DCIS of all cancers has shown a slight decline for BSA overall (Figure 3e).

Invasive cancer detection rate

The BSA biennial invasive cancer detection for women aged 50-69 years was 9.3 per 1,000 women screened for initial screens (achieving the target of ≥ 6.1 per 1,000) and 4.3 per 1,000 for subsequent screens (achieving the target of ≥ 3.45 per 1,000) (Table 3a.2b). This represented 1,652 invasive cancers detected by BSA for the 2-year reporting period. The overall proportion of node negative cancers (of all invasive cancers) was 74.1% for initial screens (target >70%) and 77.8% for subsequent screens (target >75%) (Table 3d).

Invasive cancer detected ≤ 10 mm

For women 50-69 years the overall proportion of screen detected invasive cancers ≤ 10 mm in size for the 2-year period was 32.7% for initial screens (target $\geq 25\%$) and 37.6% for subsequent screens (target $\geq 30\%$), both achieving the target (Table 3b.1). The corresponding detection rates per 10,000 women screened for invasive cancers ≤ 10 mm were substantially above the target value with 28.6 for initial screens (target ≥ 15.2 per 10,000 screens) and 15.9 for subsequent screens (target ≥ 10.45 per 10,000 screens) (Table 3b.2).

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 51.4% for initial screens (achieving the target value of >50%) and 59.7% for subsequent screens (exceeding the target of >50%) (Table 3c.1). The corresponding detection rates per 10,000 women screened for invasive cancers <15mm were on target at 45.0 for initial screens (target value >30.5 per 10,000 screens) and 25.3 for subsequent screens (target value >17.3 per 10,000 screens) (Table 3c.2).

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 95.3% for women 50-69 years, which was higher than the target value of $\geq 90\%$. BSHC was below target for this indicator (70.9%).

Assessment

The overall proportion of women offered a first assessment within 15 working days for the biennium for women 50-69 years was 87.5% achieving the target value of $\geq 90\%$ (Table 5b). There is a decrease in this indicator across all Lead Providers for the most recent reporting period, with the exception of BSAL, although only 2 Lead Providers are below target (Figures 5b).

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 64.3%. For the 6-month period the overall proportion receiving an open biopsy within 20 working days was 67.5% for women 50-69 years. (Table 5c.2; Figure 5c2)

The proportion of women who received their final diagnostic biopsy results within 5 working days was 84.6% for the 2 year period, which was below the target for this indicator (target value 90%). The overall proportion for the 6-month period was 81.5% for women aged 50-69 years. BSWN, BSAL, BSM, and BSHC were below the target for 2 year data (Table 5d; Figure 5d).

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, 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 $\geq 10\%$ and was statistically significant) or (ii) Lead Providers were below target ($\geq 5\%$ difference in magnitude, and statistically significant).

BreastScreen Waitemata and North (BSWN)

BSWN was either on target or exceeded targets for almost all biennial indicators for women in the age range of 50-69 years. In particular, BSWN significantly exceeded targets for referral to assessment as a percentage of women having a subsequent screen, the percentage of cancers from referral to assessment in women attending for a subsequent screen, invasive cancer detection for initial and subsequent screens, small cancer detection for initial and subsequent screens (both $\leq 10\text{mm}$ and $< 15\text{mm}$), small invasive cancer detection per 10,000 screens for initial screens (both $\leq 10\text{mm}$ and $< 15\text{mm}$) and subsequent screens ($< 15\text{mm}$), technical recall rates at fixed and mobile sites, the percentage of rejected films at fixed and mobile sites, benign open biopsy rates in women attending for subsequent screens, false positive rates for subsequent screens, and preoperative diagnosis of cancer for subsequent screens. Following on sustained increases in coverage for Māori and Pacific women, BSWN continues to be on target for both these indicators. Targets were not achieved for false positive rates for initial screens (11.1%, target $< 9\%$), the percentage of women receiving an open biopsy within 20 working days (64.6%, target 90%), the percentage of women receiving final diagnostic biopsy results within 5 working days (84.2, target at least 90%), and referral to assessment for initial screens (12.7%, target $< 10\%$).

BreastScreen Counties Manukau (BSCM)

BSCM were either on target or exceeded targets for almost all biennial indicators for women in the age range of 50-69 years. In particular, BSCM significantly exceeded targets for referral to assessment as a percentage of women having a subsequent screen, the percentage of cancers from referral to assessment in women attending for a subsequent screen, the percentage of women having 4 films or fewer, technical recall at fixed and mobile sites, invasive cancer detection for initial and subsequent screens, small invasive cancer detection (both $\leq 10\text{mm}$ and $< 15\text{mm}$) for subsequent screens, benign open biopsy rates in women attending for a subsequent screen, false positive rates for subsequent screens, pre-operative diagnosis of cancer, and the percentage of rejected films (fixed and mobile) sites. Targets were not achieved for overall coverage (66.3%, target value 70%), and Pacific coverage

(65.8%, target value 70%), percentage of women having a technical recall in mobile sites (3.4%, target value <3%), percentage of women referred to assessment for initial screens (11.0%, target value <10%), percentage of women receiving an open biopsy within 20 working days (27.6%, target 90%), the proportion of women receiving final biopsy results within 5 working days (82.7%, target 90%)

BreastScreen Auckland Limited (BSAL)

BSAL was 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 referral to assessment as a percentage of all women screened (for both initial and subsequent screens), the percentage of women having 4 films or fewer, the percentage of cancers from referral to assessment in women attending for a subsequent screen, invasive cancer detection for initial screens, small cancer detection (both $\leq 10\text{mm}$ and $\leq 15\text{mm}$) per 10,000 screens for initial screens, the percentage of rejected films at fixed and mobile sites, technical recall rates for fixed sites, benign open biopsy rates for subsequent screens, and false positive rates for initial and subsequent screens. Targets were not achieved for overall coverage (65.1%, target value 70%), and Māori coverage (60.3%, target value 70%), the percentage of women having a technical recall in mobile sites (4.2%, target value <3%), the percentage of women offered first assessment appointment within 15 working days (81.3%, target value 90%), the percentage of women receiving an open biopsy within 20 working days (75.9%, target 90%), and the proportion of women receiving final biopsy results within 5 working days (76.2%, target 90%)

BreastScreen Midland (BSM)

BSM was 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 referral to assessment as a percentage of women having a subsequent screen, the percentage of women having 4 films or fewer, the percentage of cancers from referral to assessment in women attending for a subsequent screen, invasive cancer detection for initial and subsequent screens, small invasive cancer detection (both $\leq 10\text{mm}$ and $< 15\text{mm}$) per 10,000 screens for subsequent screens, the percentage of rejected films at fixed and mobile sites, technical recall rates at fixed and mobile sites, preoperative diagnosis of cancer, false positive rates for subsequent screens, and benign open biopsies for subsequent screens. Targets were not achieved for overall coverage (63.7%, target value 70%), Pacific coverage (54.2%, target value 70%) and Māori coverage (55.2%, target value 70%), the percentage of women receiving an open biopsy within 20 working days (64.2%, target 90%), and the proportion of women receiving final biopsy results within 5 working days (78.8%, target 90%).

BreastScreen Coast to Coast (BSCtoC)

BSCtoC was 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 referral to assessment as a percentage of all women screened (both initial and subsequent screens), small invasive cancer detection ($\leq 10\text{mm}$) per 10,000 screens for subsequent screens, the percentage of cancers from referral to assessment of all women screened (for both initial and subsequent screens), benign open biopsy rates for women attending a subsequent screen, technical recall rates at fixed and mobile sites, the percentage of rejected films at fixed and mobile sites, false positive rates, invasive cancer detection for initial and subsequent screens, and preoperative diagnosis of cancer. Biennial coverage BSCtoC continues to increase and remains on target. Targets were not achieved for Māori coverage (62.2%, target value 70%), the percentage of women having a technical recall in mobile sites (3.4%, target value <3%), and the percentage of women receiving an open biopsy within 20 working days (58.8%, target 90%).

BreastScreen Central (BSC)

BSC was 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 referral to assessment as a percentage of women having a subsequent screen, the percentage of women having 4 films or fewer, the percentage of cancers from referral to assessment of all women screened (both initial and subsequent screens), invasive cancer detection for initial screens, small invasive cancer detection ($\leq 10\text{mm}$) per 10,000 screens for subsequent screens, the percentage of rejected films at fixed and mobile sites, benign open biopsy rates in women attending for subsequent screens, preoperative diagnosis of cancer, and false positive rates for initial and subsequent screens. Biennial coverage in BSC continues to increase and remains on target. Targets were not achieved for Pacific coverage (65.7%, target value 70%) and Māori coverage (65.6%, target value 70%).

BreastScreen South Limited (BSSL)

BSSL was 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 coverage (including coverage in Māori groups), referral to assessment as a percentage of all women screened (both initial and subsequent screens), the percentage of women having 4 films or fewer, the percentage of cancers from referral to assessment (for subsequent screens), small invasive cancer detection ($\leq 10\text{mm}$) per 10,000 screens for subsequent screens, benign open biopsy rates in women attending for subsequent screens, technical recall rates at fixed and mobile sites, the percentage of rejected films for both mobile and fixed sites, false positive rates, invasive cancer detection for subsequent screens, and preoperative diagnosis of cancer. Targets were not achieved for coverage in Pacific groups (62.0%, target 70%), and the percentage of women receiving needle biopsies within 5 working days (84.2%, target 90%).

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 referral to assessment as a percentage of women having a subsequent screen, the percentage of cancers from referral to assessment in women attending for a subsequent screen, the percentage of women having 4 films or fewer, technical recall rates for fixed and mobile sites, small invasive cancer detection ($\leq 10\text{mm}$) per 10,000 screens for subsequent screens, benign open biopsy rates for women attending for subsequent screens, the percentage of rejected films for fixed and mobile sites, false positive rates in subsequent screens, invasive cancer detection for initial and subsequent screens, and preoperative diagnosis of breast cancer for subsequent screens. Targets were not achieved for Māori coverage (54.7%, target 70%), the percentage of women notified of screening results within 10 working days (85.0%, target 90%), the percentage of women offered first assessment appointment within 15 working days (72.9%, target 90%), the percentage of women receiving an open biopsy within 20 working days (50.0%, target 90%), and the proportion of women receiving final biopsy results within 5 working days (81.3%, target 90%).

6. Conclusion

BSA is a population-based mammography screening programme that has participation rates across the target age group 50-69 years achieving the target of 70%. Overall coverage rates lower than the target value can be attributed to the significantly lower coverage in Māori and Pacific groups. However, coverage rates in Māori and Pacific groups have continued to increase, and targets have been achieved in some Lead Providers. 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 Māori (1a.7)
- Percentage of women having receiving an open biopsy within 20 working days (5c.2)
- Percentage of women receiving final diagnostic biopsy results within 5 working days (Table 5d)
- In addition to the timeliness indicators above, it should be noted that some LP are not meeting other timeliness indicators (5a, 5b, 5c1), although the national indicators are on target.

BSA ADVISORY GROUP DRAFT COMMENTS AND RECOMMENDATIONS

The BSA advisory group recognizes the difficulties experienced by BSSL during the period of the Christchurch earthquake and its aftermath.

1. Coverage 50-69 years (Tables 1.a.7.a.; Figures 1.a.7.1.)

The BSA Advisory Group is pleased to note the sustained upward trend in overall coverage such that 5 Lead Providers (of 8) are now on target Table 1.a.1; Figures 1.a.1)

There is also a continued upward trend in coverage for Māori women with an increase in Lead Providers to 3 (from 2) now on target, and an increase in coverage for Pacific women to 4 Lead Providers (from 3) now on target. Nevertheless, the overall coverage is still below the target of 70% and coverage for Māori is (63.5%), but in the 50s percentage range for two Lead Providers (that were previously below 50%).

Disparities in coverage for Māori and Pacific women still exist. It is encouraging that the Lead Providers (BreastScreen Waitemata and North, BreastScreen Midland, BreastScreen Coast to Coast) with the greatest Māori populations (61% of the Māori population) are on target (BSWN), or are increasing coverage (BSM and BS CtoC) - Tables 1.a.7.a.; Figures 1.a.7.1.

The BSA Advisory Group recommends that Lead Providers continue to focus on high priority women.

2. Re-screening (Tables 1.b.1. and 1.b.2.)

Re-screening indicators were not included in the previous report pending an NSU investigation of data extraction methods which is on-going and re-screening indicators are not included in this report.

3. Unknown histology (Table 3e)

Table 3e: Women aged 45-69 years with DCIS as a percentage of all screen detected cancers, 2 years.

A footnote to this table has been made to this table which reads:

"Numbers of DCIS and invasive cancers are for those with recorded histology."

Cases with histology not recorded will be investigated.

4. Time taken for provision of screening results (Table 5.a.)

The most recent data point from BSHC was impacted by partial out-sourcing of second reads during this period.

5. Time from Screening to First Offered Assessment (Table 5b; Figures 5b)

The BSA Advisory Group notes the increase in time from screening to offer of assessment in some Lead Provider areas for both 6 monthly and biennial data, which requires further evaluation.

6. Women receiving Needle Biopsy within 5 working days of assessment (Table 5.c.1.)

Extraction scripts for this indicator will be re-examined for the next report since a few Lead Providers have experienced a decline.

7. Timeliness of Open Biopsy (Table 5.c.2. and Figure 5.c.2.)

The NSU has changed the target to 20 days prior to the last report, in line with the recommendation made by the BSA Surgeons UDG. There has been no change in the BSA rate of 64.3% which is below the target of 90%. BSC and BSSL are on target for this indicator, and BSAL is very close to target. Explanations from other Lead Providers for these trends are required. NSU to investigate whether it is feasible to collect information on time open biopsy offered, as well as time it was performed. Extraction scripts for this indicator will be re-examined for the next report.

8. Percentage of women receiving final diagnostic biopsy results within 5 working days (2 year data) (Table 5.d, Figure 5d).

The BSA percentage of women receiving final diagnostic biopsy within 5 working days at 84.6% is below the target of 90%. BSWN, BSAL, BSM and BSHC are all below target. Explanations from Lead Providers for these trends are required.

9. Technical recall (Tables and Figures 2.b.1 and 2.b.2.)

Extraction code for this indicator has been revised back to previous logic with is now the same as that used in the Maori Report. The definition, business rules, intent and extraction code for this indicator will be thoroughly reviewed.

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

Extraction scripts for this indicator will be re-examined for the next report since a few Lead Providers have experienced a decline.

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

Written explanations are requested from BSAL and BSHC concerning their low percentage on this indicator.

12. Women having Open Biopsy within 20 working days (5.c.2.)

This indicator is below target for the national program. Information should be sought from BSC and BSSL as to the reasons for their relatively high proportion having an open biopsy within 20 working days (not significantly different from target) which may be of assistance to other Lead providers.

13. Percentage of women receiving final diagnostic biopsy results within 5 working days (Table 5d)

This indicator is below target for the national program because of low percentages in BSWN, BSAL, BSM and BSHC. Information should be sought from other lead providers as to the reasons for their relatively high proportions (not significantly different from target) which may be of assistance to other Lead Providers.

14. In response to the comments and recommendations above, the BSA Advisory Group will consider Lead Provider feedback on the report at the next meeting.

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). Until the report for women screened July 2009 - June 2011 data were extracted from the unit records and tables were sent the BSA Independent Monitoring Group (IMG) at the University of New South Wales (UNSW), School of Public Health and Community Medicine (SPHCM), Sydney, Australia.

From and including this report for women screened July 2010 - June 2012 the extraction code has been re-written and tables are assembled directly by the IMG at SPHCM UNSW from unit record data. 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 produce additional tabulations where 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 4 February 2014.

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 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 that, for many indicators, large stochastic variations are evident over time (due to small underlying numbers), trend data are 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 are not 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 2006 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 Māori, she is counted as Māori.

Confidence Intervals (CIs)

95% CIs 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 $\geq 5\%$ 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 $\geq 10\%$ that are statistically significant (from the target value) are indicated by '✓✓✓' if better than the target, or 'xxx' if worse than the target. Differences of $<5\%$ 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 0-4%, 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 are no long term trial data to indicate the achievable and optimal targets for this age group.

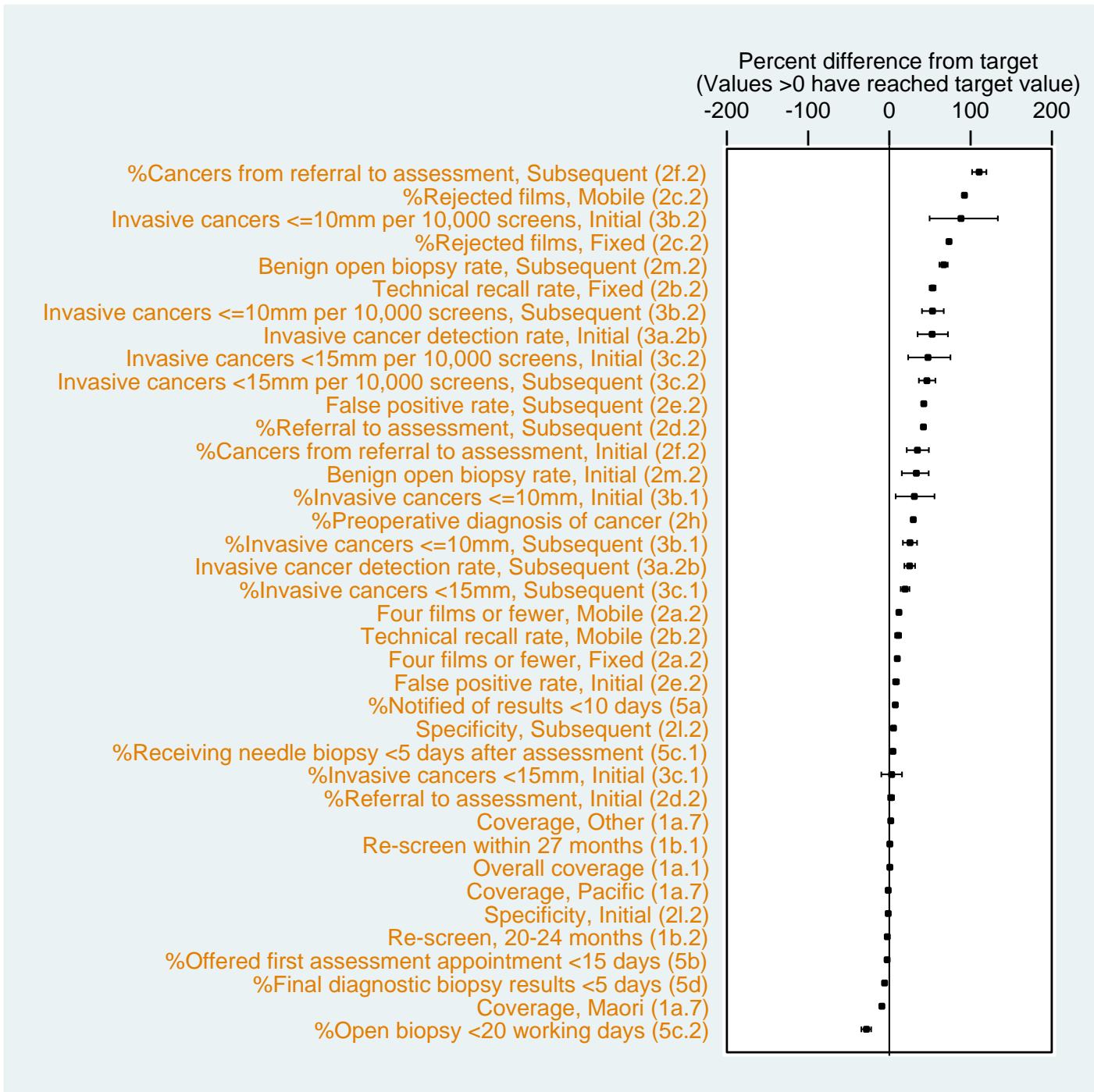
Target values relate only to biennial rates for women in the target age-group (50-69 years) for all indicators, and ticks and crosses for 6-month rates are not presented.

Initial cancer detection rates

As a mammographic screening programme 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 8.2%, whereas the subsequent screens are 91.8% (see table 1.a.2). As well as a reduction in absolute numbers with maturity (thus widening 95% CIs of rates), the age profile of women changes from all age groups 50-69 years at the beginning of the programme, to mostly younger age groups (new entrants to the programme) 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.

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

Figure 1: Biennial indicators ‘on target’, ‘better than target’, or ‘worse than target’ for BSA as measured by percent difference between observed and target value and 95% confidence intervals (Table reference in brackets)



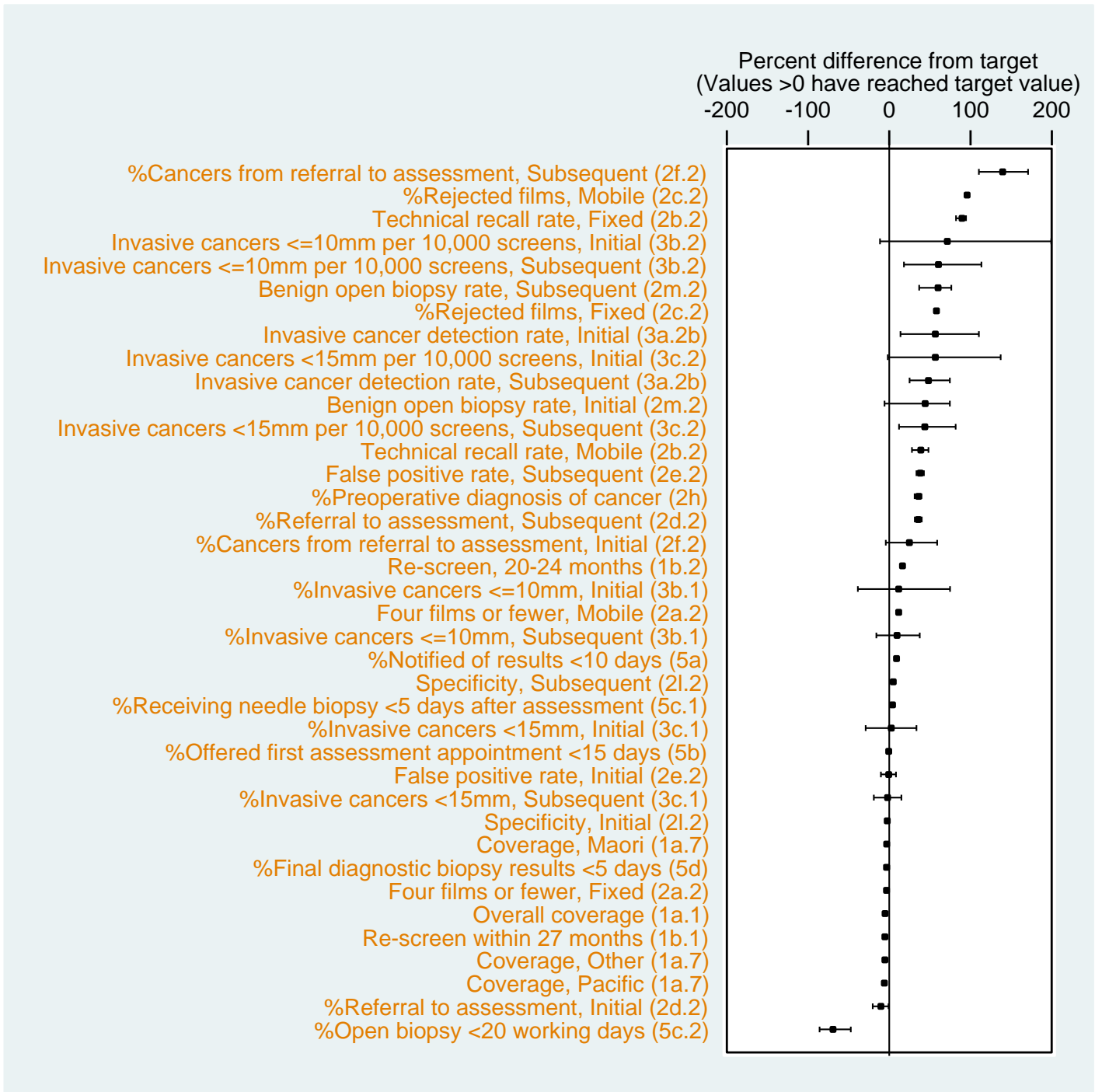
NB: The vertical line represents the target value.

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 and 95% confidence intervals (Table reference in brackets).



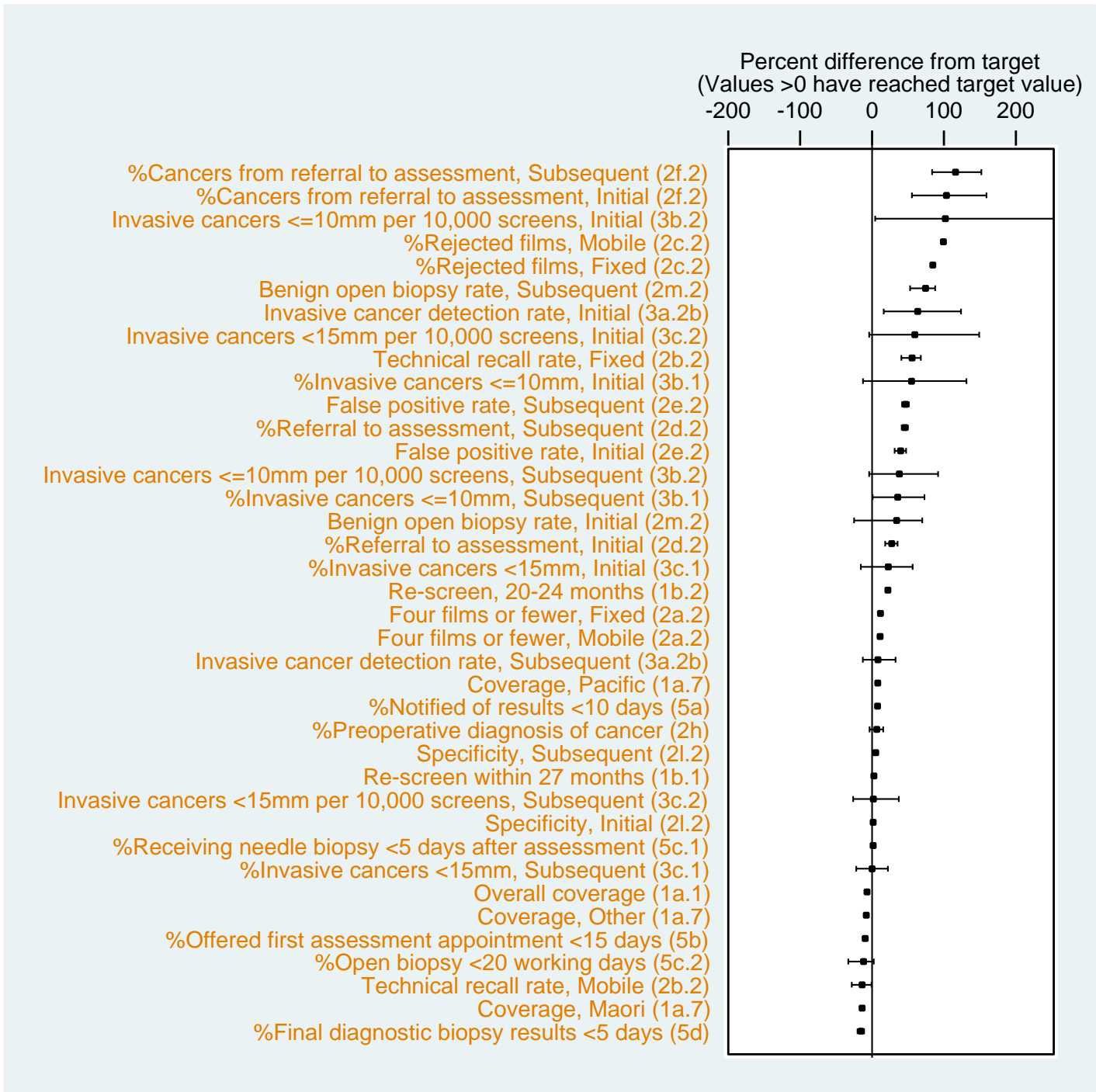
NB: The vertical line represents the target value.

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 and 95% confidence intervals (Table reference in brackets).



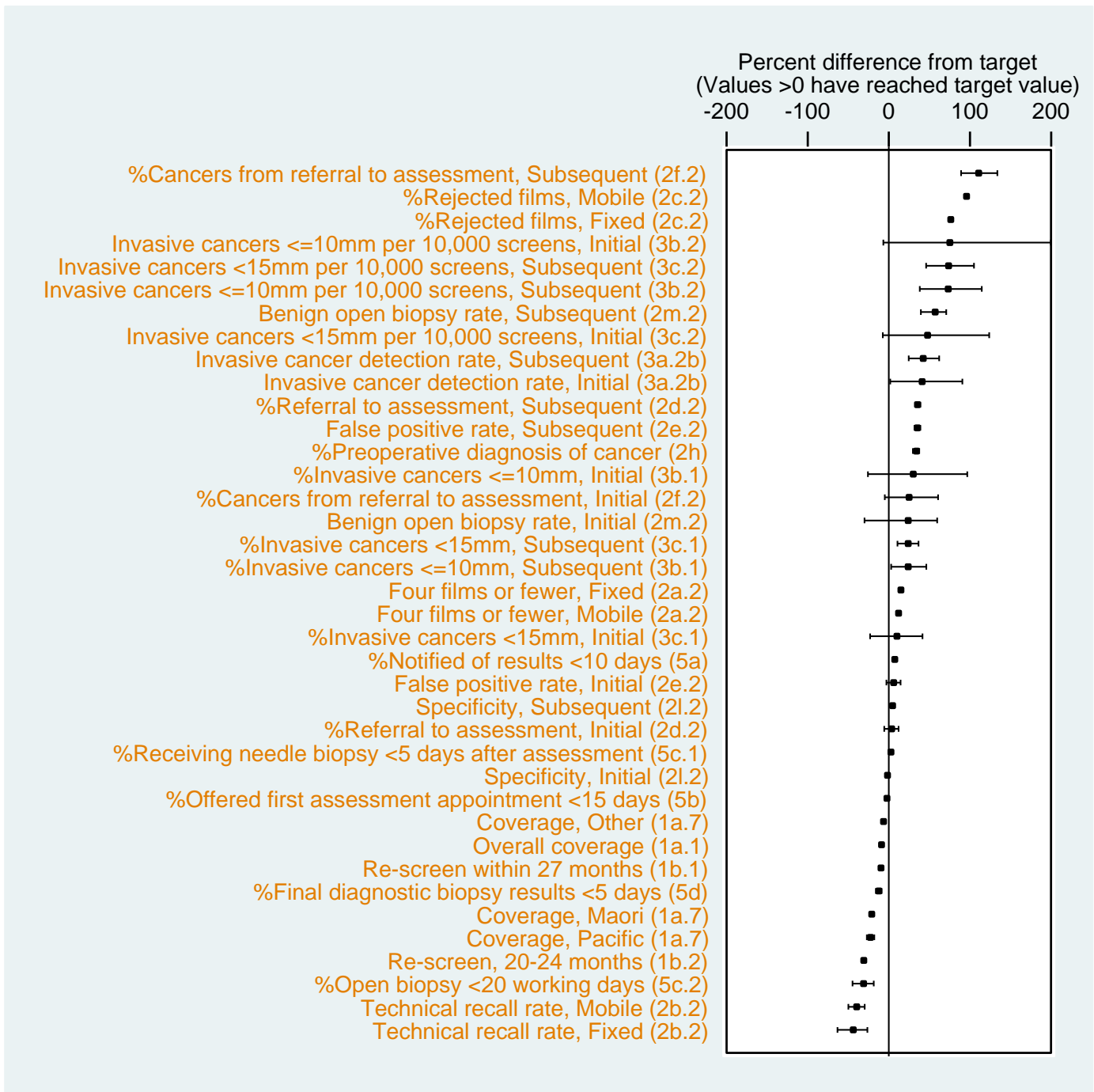
NB: The vertical line represents the target value.

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 and 95% confidence intervals (Table reference in brackets).



NB: The vertical line represents 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 and 95% confidence intervals (Table reference in brackets)



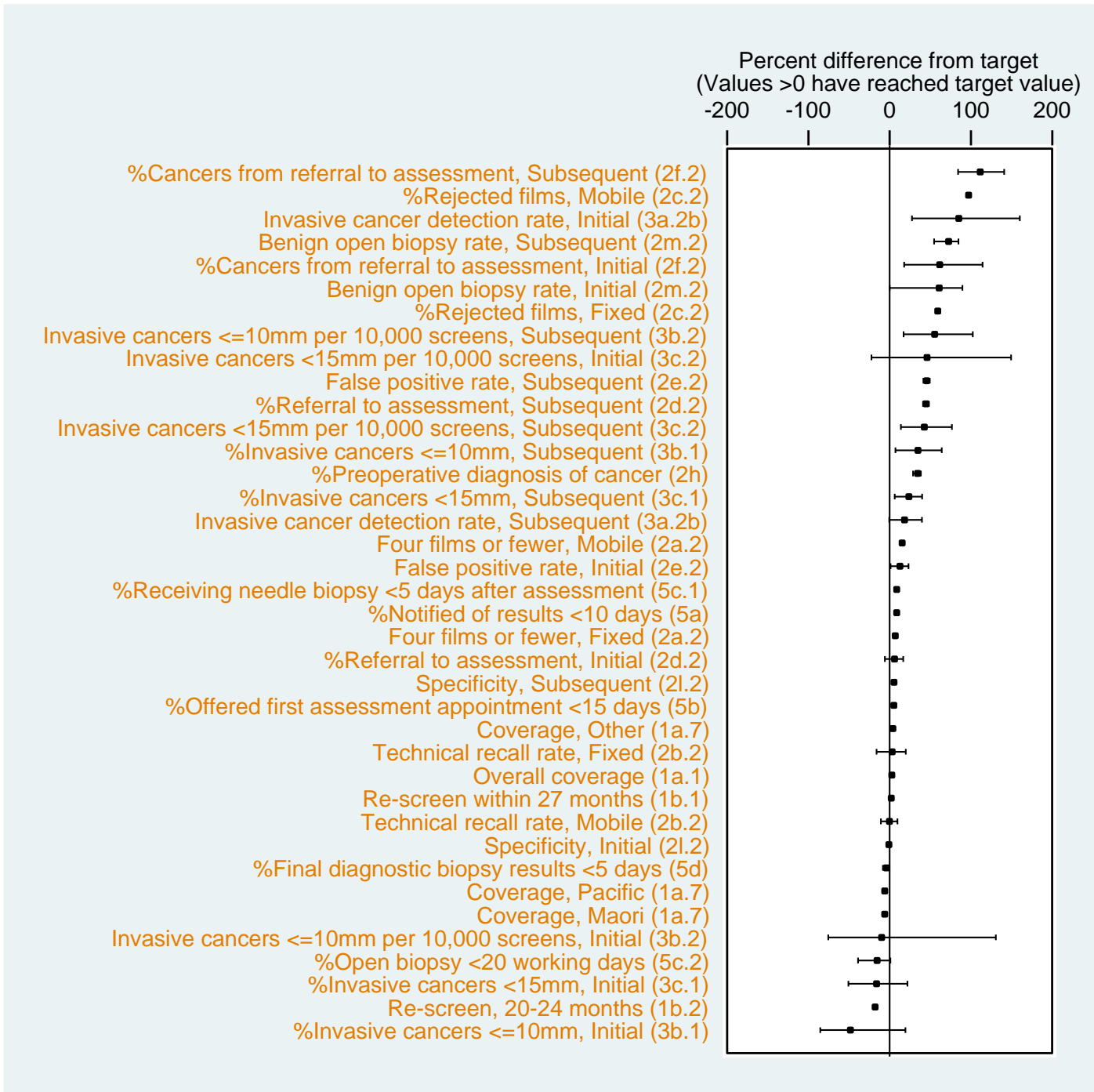
NB: The vertical line represents the target value.

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 and 95% confidence intervals (Table reference in brackets)



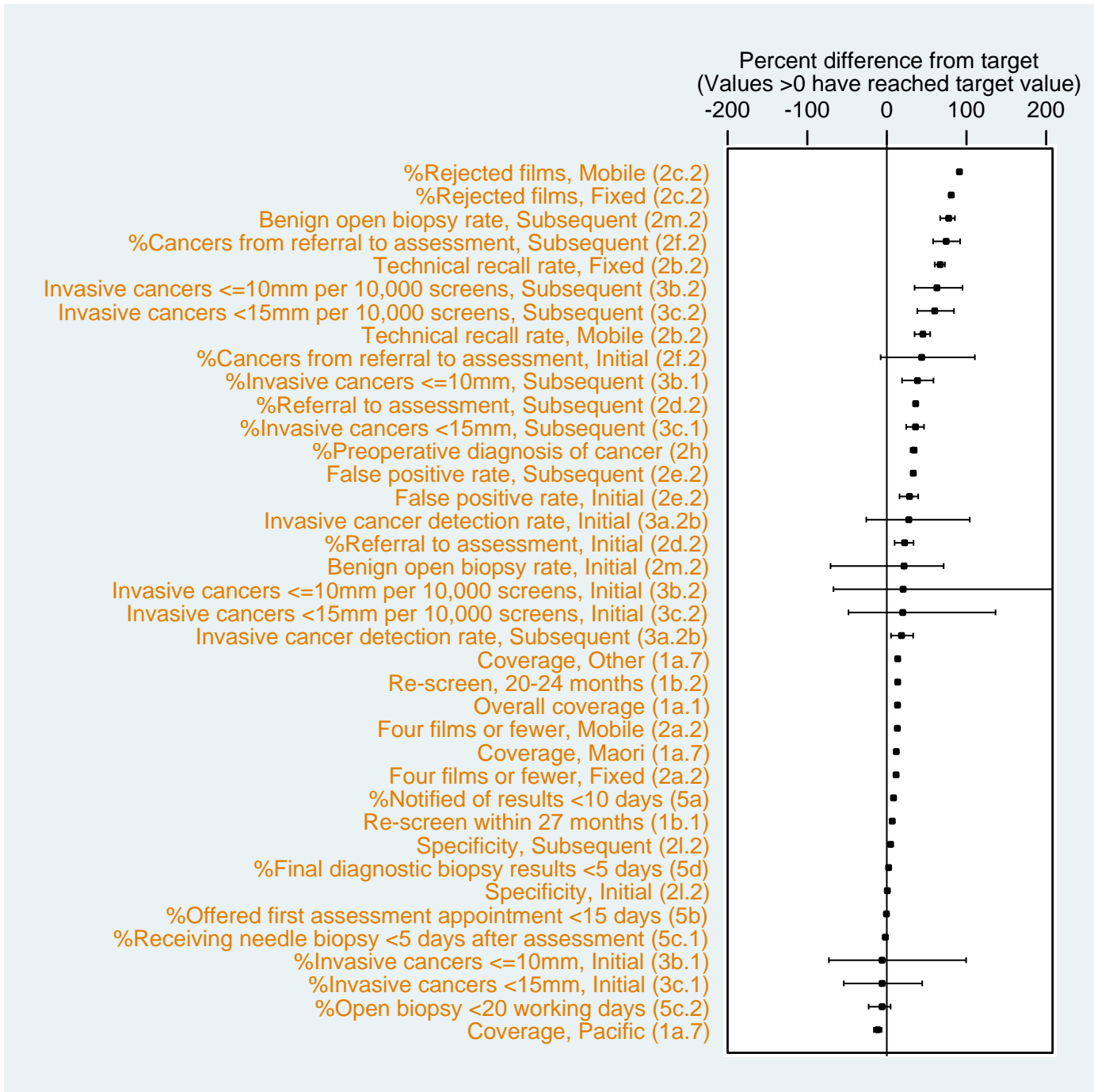
NB: The vertical line represents the target value.

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 and 95% confidence intervals (Table reference in brackets)



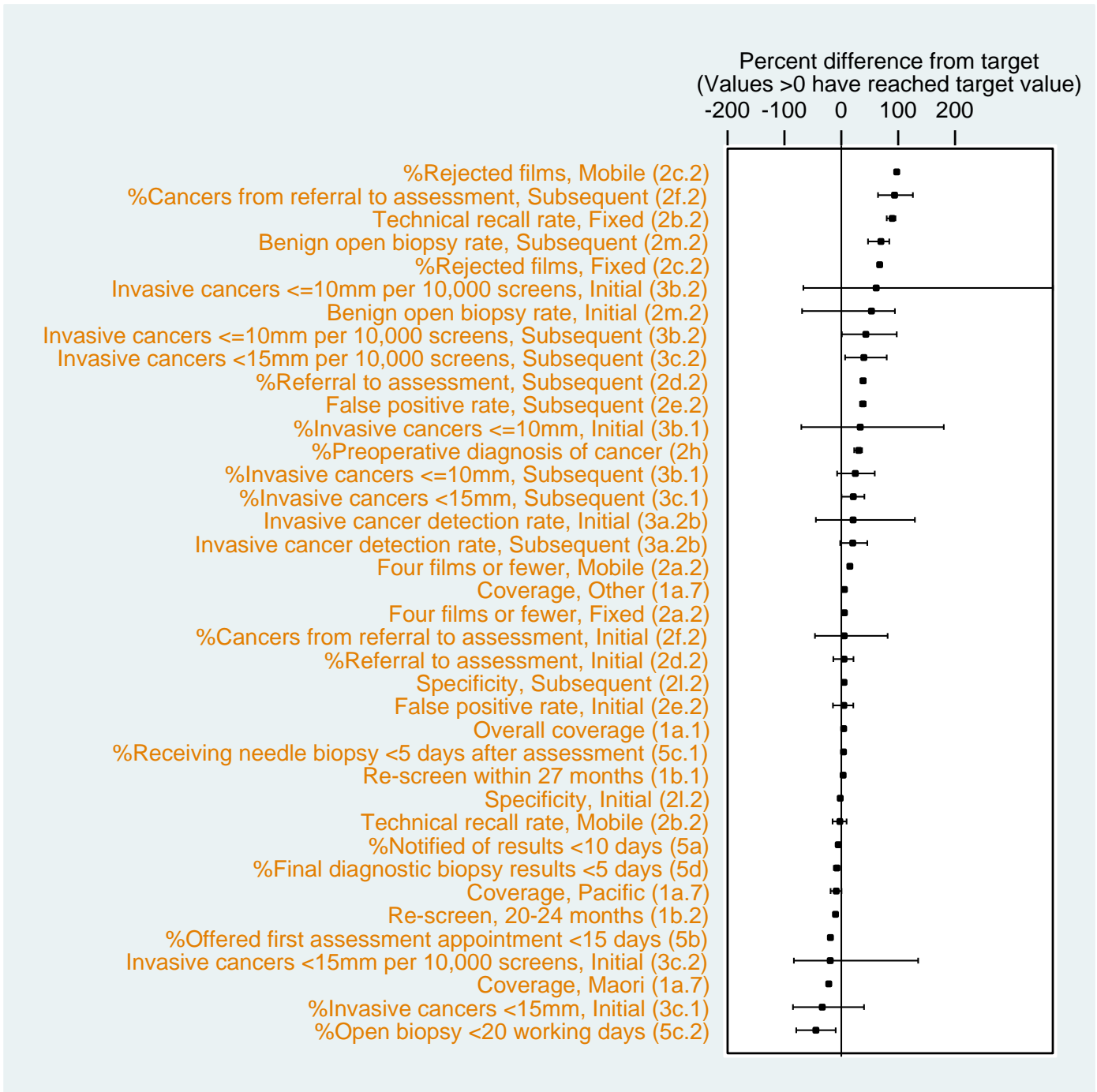
NB: The vertical line represents the target value.

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 and 95% confidence intervals (Table reference in brackets)



NB: The vertical line represents 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 and 95% confidence intervals (Table reference in brackets)



NB: The vertical line represents 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)		
<i>45-49 years</i>								
BSWN	5,042	27,860	18.1 (17.6-18.6)	19,859	27,860	71.3 (70.7-71.8)		
BSCM	3,560	18,480	19.3 (18.7-19.8)	12,905	18,480	69.8 (69.2-70.5)		
BSAL	3,131	16,610	18.9 (18.3-19.5)	11,134	16,610	67.0 (66.3-67.7)		
BSM	4,097	25,010	16.4 (15.9-16.8)	14,852	25,010	59.4 (58.8-60.0)		
BSCtoC	3,421	20,015	17.1 (16.6-17.6)	13,529	20,015	67.6 (66.9-68.2)		
BSC	3,018	17,975	16.8 (16.2-17.3)	11,784	17,975	65.6 (64.9-66.3)		
BSSL	6,578	28,395	23.2 (22.7-23.7)	24,446	28,395	86.1 (85.7-86.5)		
BSHC	1,290	10,990	11.7 (11.1-12.4)	7,023	10,990	63.9 (63.0-64.8)		
BSA Total	30,137	165,335	18.2 (18.0-18.4)	115,532	165,335	69.9 (69.7-70.1)		
<i>50-69 years</i>								
BSWN	14,352	80,750	17.8 (17.5-18.0)	55,970	80,750	69.3 (69.0-69.6)	✓	*
BSCM	8,927	49,440	18.1 (17.7-18.4)	32,768	49,440	66.3 (65.9-66.7)	xx	*
BSAL	7,987	43,490	18.4 (18.0-18.7)	28,304	43,490	65.1 (64.6-65.5)	xx	*
BSM	13,824	80,840	17.1 (16.8-17.4)	51,513	80,840	63.7 (63.4-64.1)	xx	*
BSCtoC	13,130	65,550	20.0 (19.7-20.3)	46,753	65,550	71.3 (71.0-71.7)	✓	*
BSC	9,581	51,505	18.6 (18.3-18.9)	36,972	51,505	71.8 (71.4-72.2)	✓	*
BSSL	20,840	90,575	23.0 (22.7-23.3)	71,914	90,575	79.4 (79.1-79.7)	✓✓✓	*
BSHC	6,347	35,660	17.8 (17.4-18.2)	26,039	35,660	73.0 (72.6-73.5)	✓	*
BSA Total	94,988	497,810	19.1 (19.0-19.2)	350,233	497,810	70.4 (70.2-70.5)	✓	*

Note: Eligible populations are based on projections from the 2006 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

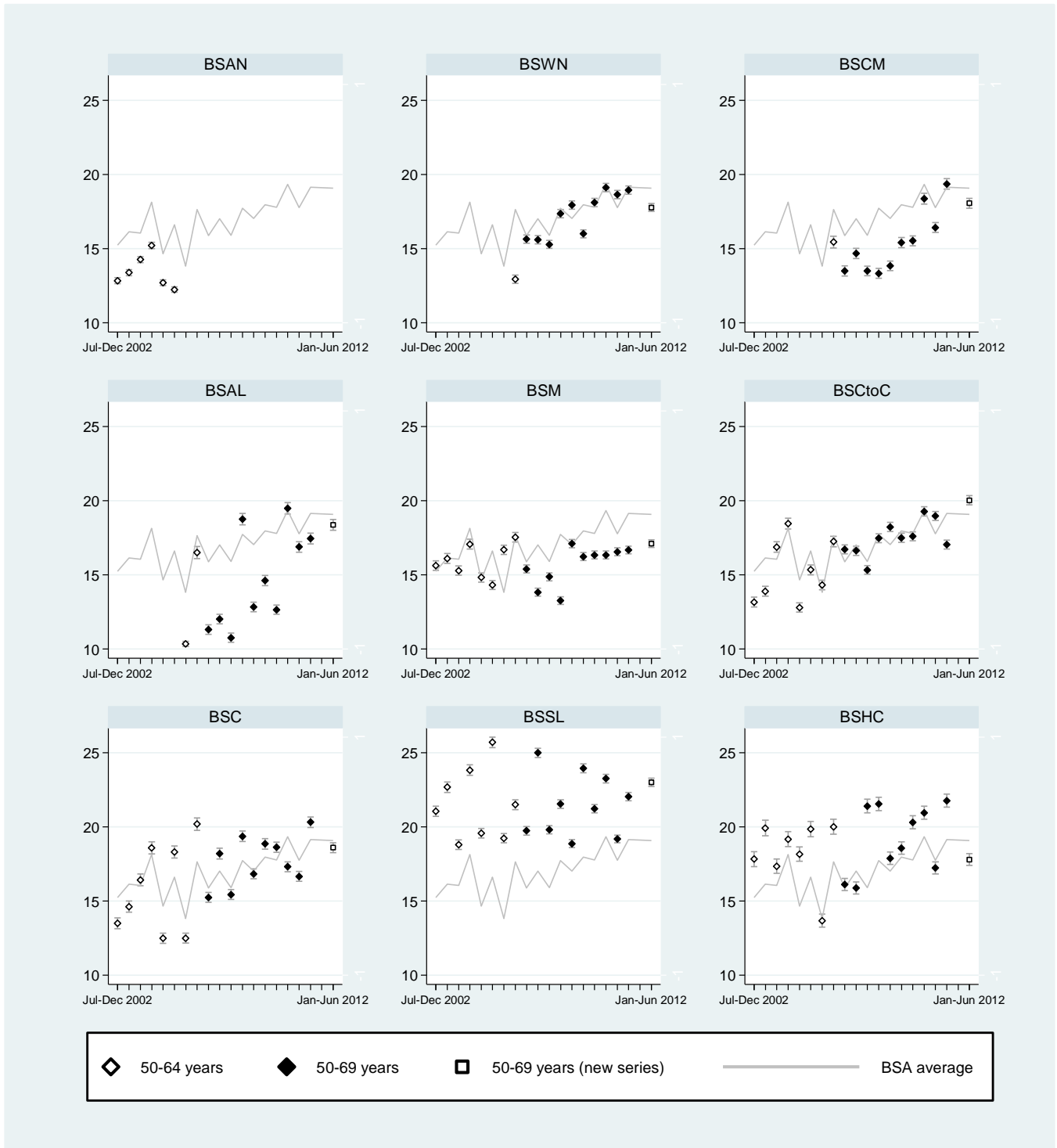
✓✓ Difference of ≥ 5-9% magnitude better than target value and statistically significant

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

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

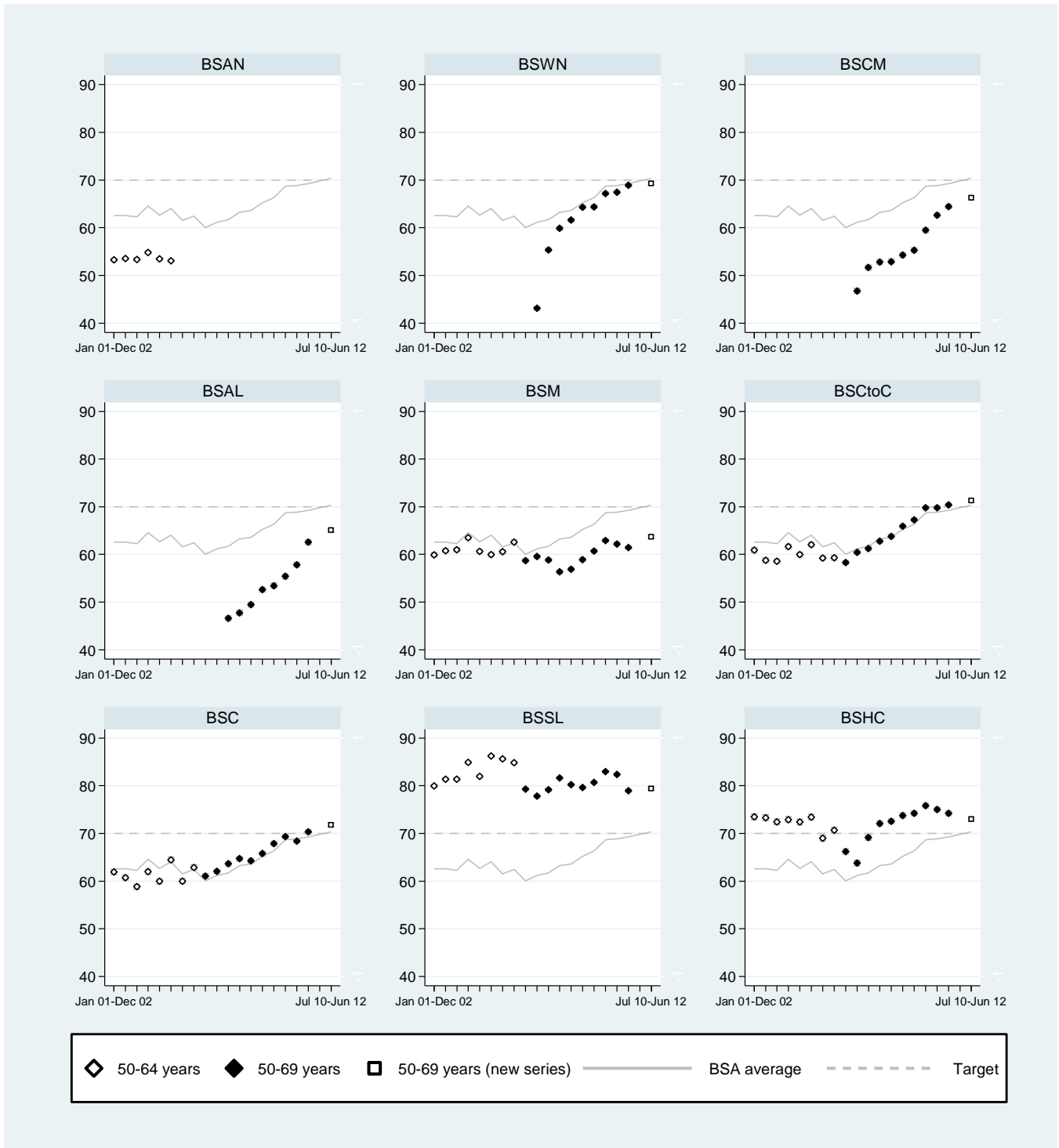
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

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



Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun 2012) are based on revised data extraction protocols

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



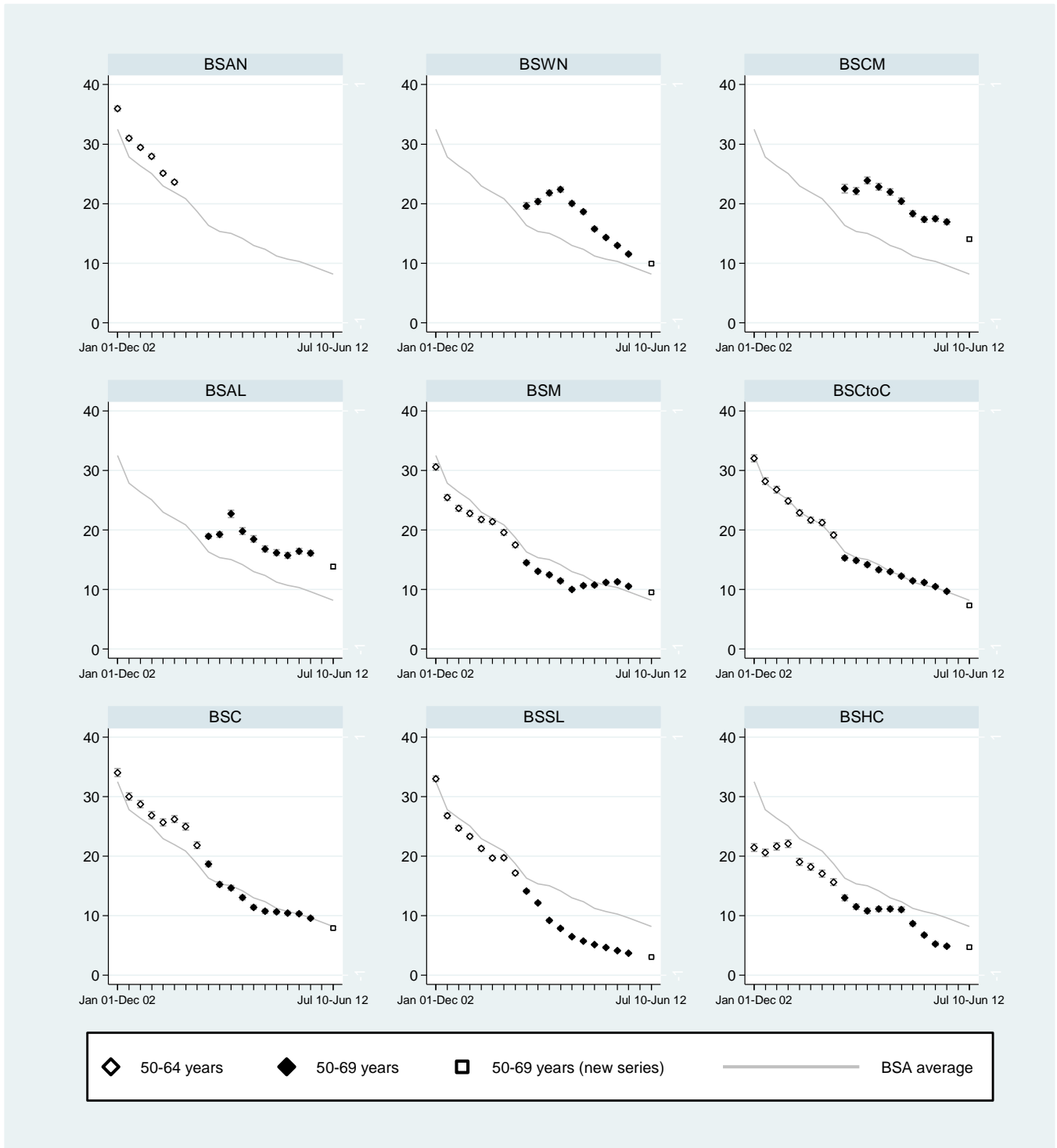
Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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

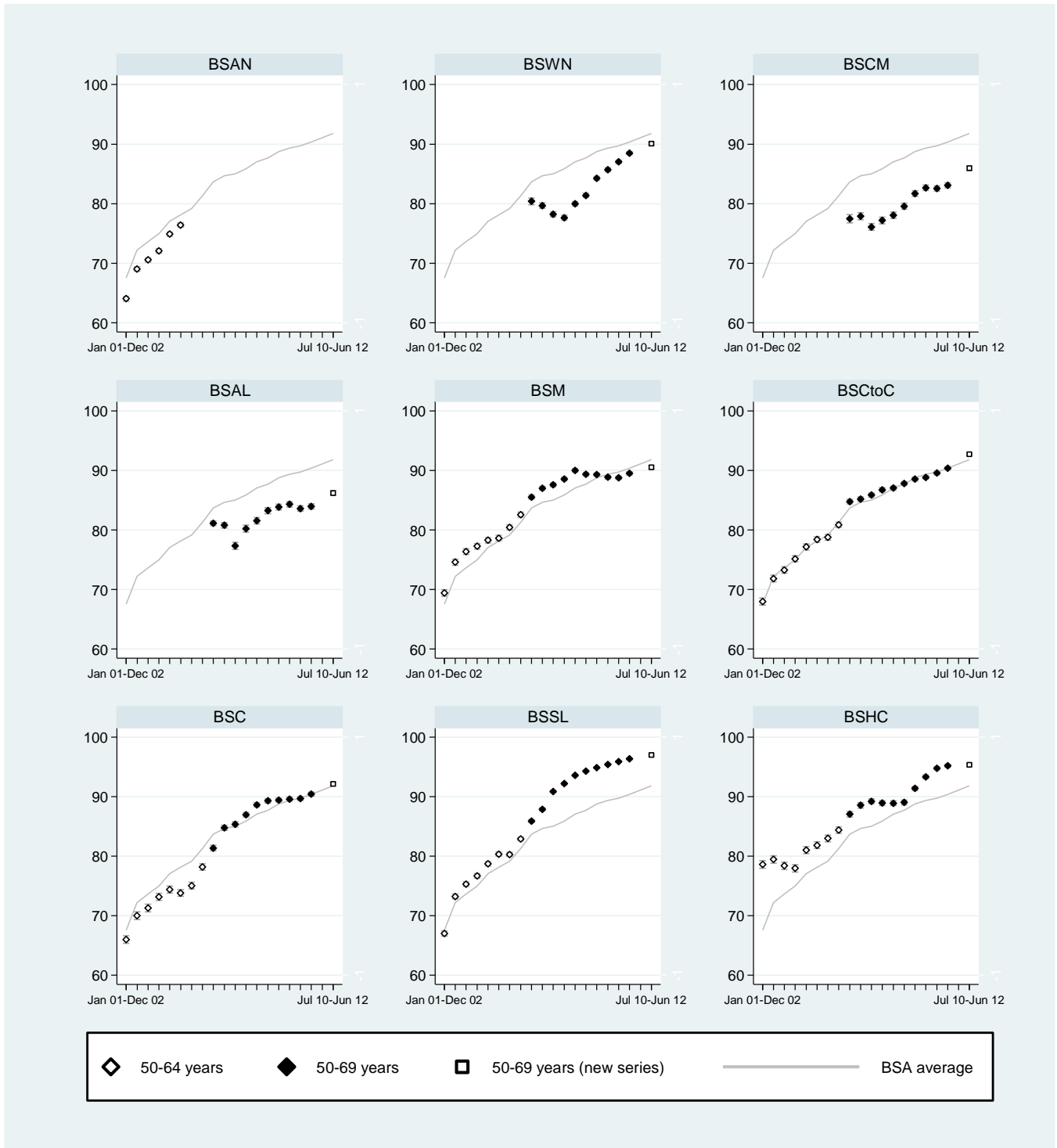
	Initial screens	Number of w omen screened	% (95%CI)	Subsequent screens	Number of w omen screened	% (95%CI)
<i>45-49 years</i>						
BSWN	9,744	19,859	49.1 (48.4-49.8)	10,115	19,859	50.9 (50.2-51.6)
BSCM	7,069	12,905	54.8 (53.9-55.6)	5,836	12,905	45.2 (44.4-46.1)
BSAL	5,495	11,134	49.4 (48.4-50.3)	5,639	11,134	50.6 (49.7-51.6)
BSM	7,817	14,852	52.6 (51.8-53.4)	7,035	14,852	47.4 (46.6-48.2)
BSCtoC	6,077	13,529	44.9 (44.1-45.8)	7,452	13,529	55.1 (54.2-55.9)
BSC	5,654	11,784	48.0 (47.1-48.9)	6,130	11,784	52.0 (51.1-52.9)
BSSL	9,402	24,446	38.5 (37.8-39.1)	15,044	24,446	61.5 (60.9-62.2)
BSHC	3,020	7,023	43.0 (41.8-44.2)	4,003	7,023	57.0 (55.8-58.2)
BSA Total	54,278	115,532	47.0 (46.7-47.3)	61,254	115,532	53.0 (52.7-53.3)
<i>50-69 years</i>						
BSWN	5,558	55,970	9.9 (9.7-10.2)	50,412	55,970	90.1 (89.8-90.3)
BSCM	4,606	32,768	14.1 (13.7-14.4)	28,162	32,768	85.9 (85.6-86.3)
BSAL	3,908	28,304	13.8 (13.4-14.2)	24,396	28,304	86.2 (85.8-86.6)
BSM	4,882	51,513	9.5 (9.2-9.7)	46,631	51,513	90.5 (90.3-90.8)
BSCtoC	3,409	46,753	7.3 (7.1-7.5)	43,344	46,753	92.7 (92.5-92.9)
BSC	2,923	36,972	7.9 (7.6-8.2)	34,049	36,972	92.1 (91.8-92.4)
BSSL	2,186	71,914	3.0 (2.9-3.2)	69,728	71,914	97.0 (96.8-97.1)
BSHC	1,221	26,039	4.7 (4.4-5.0)	24,818	26,039	95.3 (95.0-95.6)
BSA Total	28,693	350,233	8.2 (8.1-8.3)	321,540	350,233	91.8 (91.7-91.9)

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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 w omen screened	% (95%CI)	Mobile site screens	Number of w omen screened	% (95%CI)
<i>45-49 years</i>						
BSWN	15,799	19,859	79.6 (79.0-80.1)	4,060	19,859	20.4 (19.9-21.0)
BSCM	9,993	12,905	77.4 (76.7-78.2)	2,912	12,905	22.6 (21.8-23.3)
BSAL	7,887	11,134	70.8 (70.0-71.7)	3,247	11,134	29.2 (28.3-30.0)
BSM	10,167	14,852	68.5 (67.7-69.2)	4,685	14,852	31.5 (30.8-32.3)
BSCtoC	11,774	13,529	87.0 (86.5-87.6)	1,755	13,529	13.0 (12.4-13.5)
BSC	7,889	11,784	66.9 (66.1-67.8)	3,895	11,784	33.1 (32.2-33.9)
BSSL	21,953	24,446	89.8 (89.4-90.2)	2,493	24,446	10.2 (9.8-10.6)
BSHC	4,698	7,023	66.9 (65.8-68.0)	2,325	7,023	33.1 (32.0-34.2)
BSA Total	90,160	115,532	78.0 (77.8-78.3)	25,372	115,532	22.0 (21.7-22.2)
<i>50-69 years</i>						
BSWN	44,165	55,970	78.9 (78.6-79.2)	11,805	55,970	21.1 (20.8-21.4)
BSCM	24,887	32,768	75.9 (75.5-76.4)	7,881	32,768	24.1 (23.6-24.5)
BSAL	20,313	28,304	71.8 (71.2-72.3)	7,991	28,304	28.2 (27.7-28.8)
BSM	33,769	51,513	65.6 (65.1-66.0)	17,744	51,513	34.4 (34.0-34.9)
BSCtoC	40,104	46,753	85.8 (85.5-86.1)	6,649	46,753	14.2 (13.9-14.5)
BSC	24,146	36,972	65.3 (64.8-65.8)	12,826	36,972	34.7 (34.2-35.2)
BSSL	64,127	71,914	89.2 (88.9-89.4)	7,787	71,914	10.8 (10.6-11.1)
BSHC	17,081	26,039	65.6 (65.0-66.2)	8,958	26,039	34.4 (33.8-35.0)
BSA Total	268,592	350,233	76.7 (76.5-76.8)	81,641	350,233	23.3 (23.2-23.5)

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)			
<i>50-54 years</i>									
BSWN	4,301	25,270	17.0 (16.6-17.5)	16,862	25,270	66.7 (66.1-67.3)		✓	*
BSCM	2,641	15,990	16.5 (15.9-17.1)	10,296	15,990	64.4 (63.6-65.1)		xx	*
BSAL	2,780	14,360	19.4 (18.7-20.0)	9,061	14,360	63.1 (62.3-63.9)		xx	*
BSM	3,828	24,020	15.9 (15.5-16.4)	14,243	24,020	59.3 (58.7-59.9)		xxx	*
BSCtoC	3,613	19,520	18.5 (18.0-19.1)	13,307	19,520	68.2 (67.5-68.8)		✓	*
BSC	2,867	16,205	17.7 (17.1-18.3)	11,101	16,205	68.5 (67.8-69.2)		✓	*
BSSL	6,663	27,075	24.6 (24.1-25.1)	20,510	27,075	75.8 (75.2-76.3)		✓✓	*
BSHC	1,755	10,845	16.2 (15.5-16.9)	7,810	10,845	72.0 (71.2-72.9)		✓	*
BSA Total	28,448	153,285	18.6 (18.4-18.8)	103,190	153,285	67.3 (67.1-67.6)		✓	*
<i>55-59 years</i>									
BSWN	3,777	20,950	18.0 (17.5-18.6)	14,662	20,950	70.0 (69.4-70.6)		✓	ns
BSCM	2,518	13,120	19.2 (18.5-19.9)	8,828	13,120	67.3 (66.5-68.1)		✓	*
BSAL	2,234	12,000	18.6 (17.9-19.3)	7,846	12,000	65.4 (64.5-66.2)		xx	*
BSM	3,443	21,200	16.2 (15.7-16.7)	13,203	21,200	62.3 (61.6-62.9)		xxx	*
BSCtoC	3,275	17,255	19.0 (18.4-19.6)	12,276	17,255	71.1 (70.5-71.8)		✓	*
BSC	2,538	13,575	18.7 (18.0-19.4)	9,713	13,575	71.6 (70.8-72.3)		✓	*
BSSL	5,193	23,855	21.8 (21.2-22.3)	19,405	23,855	81.3 (80.8-81.8)		✓✓✓	*
BSHC	1,577	9,380	16.8 (16.1-17.6)	6,829	9,380	72.8 (71.9-73.7)		✓	*
BSA Total	24,555	131,335	18.7 (18.5-18.9)	92,762	131,335	70.6 (70.4-70.9)		✓	*
<i>60-64 years</i>									
BSWN	3,542	19,420	18.2 (17.7-18.8)	13,618	19,420	70.1 (69.5-70.8)		✓	ns
BSCM	2,194	11,540	19.0 (18.3-19.7)	7,740	11,540	67.1 (66.2-67.9)		✓	*
BSAL	1,735	9,980	17.4 (16.6-18.1)	6,711	9,980	67.2 (66.3-68.2)		✓	*
BSM	3,392	19,850	17.1 (16.6-17.6)	13,175	19,850	66.4 (65.7-67.0)		xx	*
BSCtoC	3,553	16,225	21.9 (21.3-22.5)	11,864	16,225	73.1 (72.4-73.8)		✓	*
BSC	2,407	12,420	19.4 (18.7-20.1)	9,206	12,420	74.1 (73.3-74.9)		✓✓	*
BSSL	5,156	22,590	22.8 (22.3-23.4)	18,256	22,590	80.8 (80.3-81.3)		✓✓✓	*
BSHC	1,719	8,805	19.5 (18.7-20.4)	6,504	8,805	73.9 (72.9-74.8)		✓✓	*
BSA Total	23,698	120,830	19.6 (19.4-19.8)	87,074	120,830	72.1 (71.8-72.3)		✓	*
<i>65-69 years</i>									
BSWN	2,732	15,110	18.1 (17.5-18.7)	10,828	15,110	71.7 (70.9-72.4)		✓	*
BSCM	1,574	8,790	17.9 (17.1-18.7)	5,904	8,790	67.2 (66.2-68.1)		✓	*
BSAL	1,238	7,150	17.3 (16.4-18.2)	4,686	7,150	65.5 (64.4-66.6)		xx	*
BSM	3,161	15,770	20.0 (19.4-20.7)	10,892	15,770	69.1 (68.3-69.8)		✓	*
BSCtoC	2,689	12,550	21.4 (20.7-22.2)	9,306	12,550	74.2 (73.4-74.9)		✓✓	*
BSC	1,769	9,305	19.0 (18.2-19.8)	6,952	9,305	74.7 (73.8-75.6)		✓✓	*
BSSL	3,828	17,055	22.4 (21.8-23.1)	13,743	17,055	80.6 (80.0-81.2)		✓✓✓	*
BSHC	1,296	6,630	19.5 (18.6-20.5)	4,896	6,630	73.8 (72.8-74.9)		✓✓	*
BSA Total	18,287	92,360	19.8 (19.5-20.1)	67,207	92,360	72.8 (72.5-73.1)		✓	*

Note: Eligible populations are based on projections from the 2006 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)
<i>Maori</i>						
BSWN	628	3,290	19.1 (17.8-20.5)	2,260	3,290	68.7 (67.1-70.3)
BSCM	497	2,460	20.2 (18.6-21.8)	1,692	2,460	68.8 (66.9-70.6)
BSAL	184	1,130	16.3 (14.2-18.6)	713	1,130	63.1 (60.2-65.9)
BSM	757	5,200	14.6 (13.6-15.5)	2,519	5,200	48.4 (47.1-49.8)
BSCtoC	652	3,980	16.4 (15.2-17.6)	2,243	3,980	56.4 (54.8-57.9)
BSC	329	1,920	17.1 (15.5-18.9)	1,151	1,920	59.9 (57.7-62.1)
BSSL	383	1,750	21.9 (20.0-23.9)	1,432	1,750	81.8 (79.9-83.6)
BSHC	101	760	13.3 (11.0-15.9)	444	760	58.4 (54.8-62.0)
BSA Total	3,531	20,490	17.2 (16.7-17.8)	12,454	20,490	60.8 (60.1-61.5)
<i>Pacific</i>						
BSWN	237	1,340	17.7 (15.7-19.8)	996	1,340	74.3 (71.9-76.6)
BSCM	640	3,290	19.5 (18.1-20.8)	2,292	3,290	69.7 (68.1-71.2)
BSAL	328	1,630	20.1 (18.2-22.2)	1,238	1,630	76.0 (73.8-78.0)
BSM	50	430	11.6 (8.8-15.0)	204	430	47.4 (42.6-52.3)
BSCtoC	55	345	15.9 (12.2-20.2)	207	345	60.0 (54.6-65.2)
BSC	146	1,045	14.0 (11.9-16.2)	608	1,045	58.2 (55.1-61.2)
BSSL	74	390	19.0 (15.2-23.2)	231	390	59.2 (54.2-64.1)
BSHC	14	100	14.0 (7.9-22.4)	57	100	57.0 (46.7-66.9)
BSA Total	1,544	8,570	18.0 (17.2-18.8)	5,833	8,570	68.1 (67.1-69.0)
<i>Other</i>						
BSWN	4,177	23,230	18.0 (17.5-18.5)	16,603	23,230	71.5 (70.9-72.1)
BSCM	2,423	12,730	19.0 (18.4-19.7)	8,921	12,730	70.1 (69.3-70.9)
BSAL	2,619	13,850	18.9 (18.3-19.6)	9,183	13,850	66.3 (65.5-67.1)
BSM	3,290	19,380	17.0 (16.5-17.5)	12,129	19,380	62.6 (61.9-63.3)
BSCtoC	2,714	15,690	17.3 (16.7-17.9)	11,079	15,690	70.6 (69.9-71.3)
BSC	2,543	15,010	16.9 (16.3-17.6)	10,025	15,010	66.8 (66.0-67.5)
BSSL	6,121	26,255	23.3 (22.8-23.8)	22,783	26,255	86.8 (86.4-87.2)
BSHC	1,175	10,130	11.6 (11.0-12.2)	6,522	10,130	64.4 (63.4-65.3)
BSA Total	25,062	136,275	18.4 (18.2-18.6)	97,245	136,275	71.4 (71.1-71.6)

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)		
<i>Maori</i>								
BSWN	1,496	7,760	19.3 (18.4-20.2)	5,403	7,760	69.6 (68.6-70.6)	✓	ns
BSCM	1,025	5,340	19.2 (18.1-20.3)	3,622	5,340	67.8 (66.6-69.1)	✓	*
BSAL	479	2,710	17.7 (16.3-19.2)	1,633	2,710	60.3 (58.4-62.1)	xxx	*
BSM	2,016	12,460	16.2 (15.5-16.8)	6,878	12,460	55.2 (54.3-56.1)	xxx	*
BSCtoC	1,825	9,430	19.4 (18.6-20.2)	5,867	9,430	62.2 (61.2-63.2)	xxx	*
BSC	777	4,250	18.3 (17.1-19.5)	2,790	4,250	65.6 (64.2-67.1)	xx	*
BSSL	974	3,900	25.0 (23.6-26.4)	3,055	3,900	78.3 (77.0-79.6)	✓✓✓	*
BSHC	224	1,670	13.4 (11.8-15.1)	914	1,670	54.7 (52.3-57.1)	xxx	*
BSA Total	8,816	47,520	18.6 (18.2-18.9)	30,162	47,520	63.5 (63.0-63.9)	xx	*
<i>Pacific</i>								
BSWN	633	2,880	22.0 (20.5-23.5)	2,271	2,880	78.9 (77.3-80.3)	✓✓✓	*
BSCM	1,427	7,420	19.2 (18.3-20.1)	4,881	7,420	65.8 (64.7-66.9)	xx	*
BSAL	741	3,670	20.2 (18.9-21.5)	2,774	3,670	75.6 (74.2-77.0)	✓✓	*
BSM	127	970	13.1 (11.0-15.4)	526	970	54.2 (51.0-57.4)	xxx	*
BSCtoC	149	690	21.6 (18.6-24.9)	484	690	70.1 (66.6-73.5)	✓	ns
BSC	382	2,540	15.0 (13.7-16.5)	1,669	2,540	65.7 (63.8-67.6)	xx	*
BSSL	147	835	17.6 (15.1-20.4)	518	835	62.0 (58.6-65.3)	xxx	*
BSHC	37	210	17.6 (12.7-23.5)	134	210	63.8 (56.9-70.3)	✓	ns
BSA Total	3,643	19,215	19.0 (18.4-19.5)	13,257	19,215	69.0 (68.3-69.6)	✓	*
<i>Other</i>								
BSWN	12,223	70,110	17.4 (17.2-17.7)	48,296	70,110	68.9 (68.5-69.2)	✓	*
BSCM	6,475	36,680	17.7 (17.3-18.0)	24,265	36,680	66.2 (65.7-66.6)	xx	*
BSAL	6,767	37,110	18.2 (17.8-18.6)	23,897	37,110	64.4 (63.9-64.9)	xx	*
BSM	11,681	67,410	17.3 (17.0-17.6)	44,109	67,410	65.4 (65.1-65.8)	xx	*
BSCtoC	11,156	55,430	20.1 (19.8-20.5)	40,402	55,430	72.9 (72.5-73.3)	✓	*
BSC	8,422	44,715	18.8 (18.5-19.2)	32,513	44,715	72.7 (72.3-73.1)	✓	*
BSSL	19,719	85,840	23.0 (22.7-23.3)	68,341	85,840	79.6 (79.3-79.9)	✓✓✓	*
BSHC	6,086	33,780	18.0 (17.6-18.4)	24,991	33,780	74.0 (73.5-74.4)	✓✓	*
BSA Total	82,529	431,075	19.1 (19.0-19.3)	306,814	431,075	71.2 (71.0-71.3)	✓	*

Note: Eligible populations are based on projections from the 2006 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

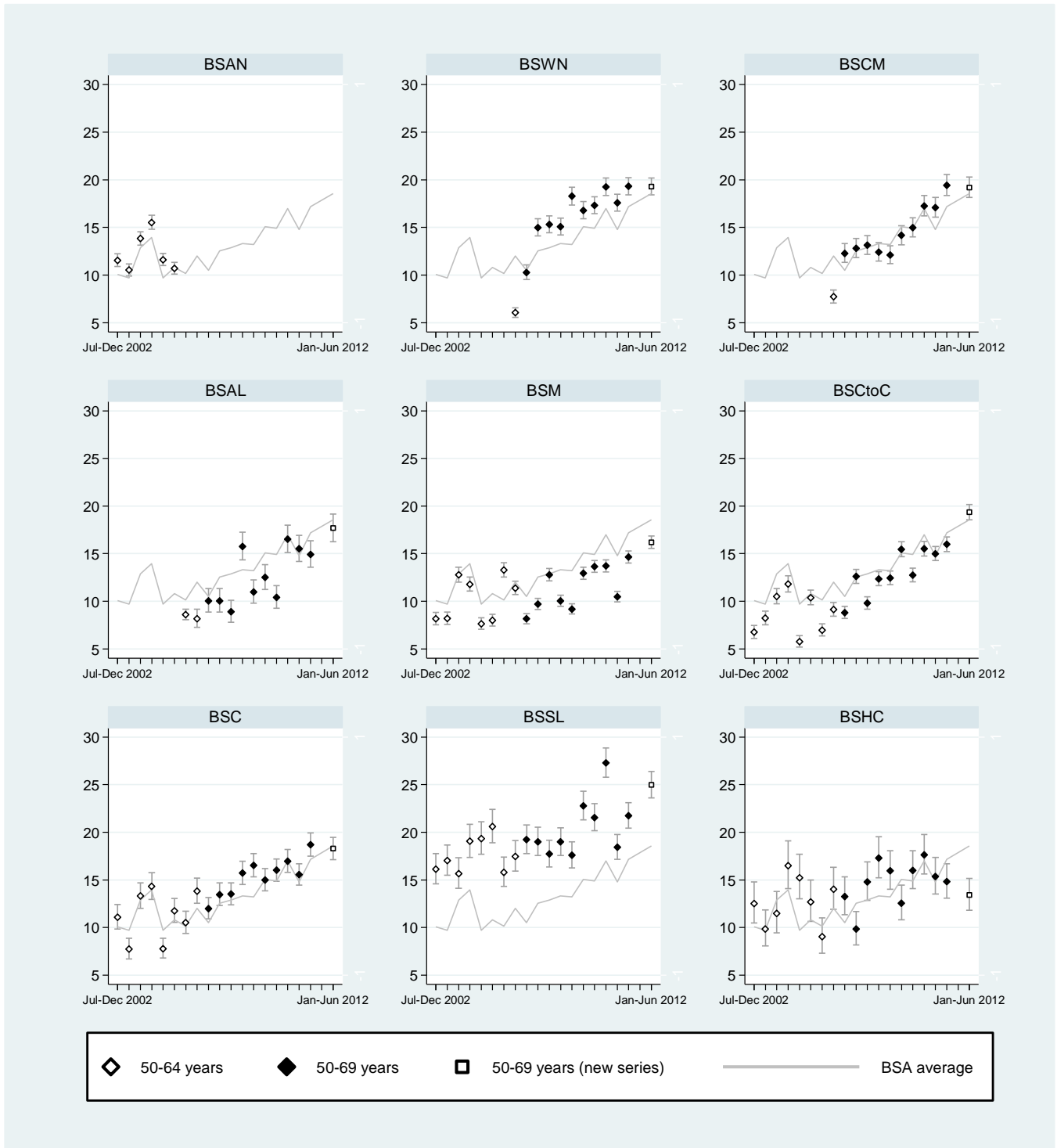
✓✓ Difference of ≥ 5-9% magnitude better than target value and statistically significant

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

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

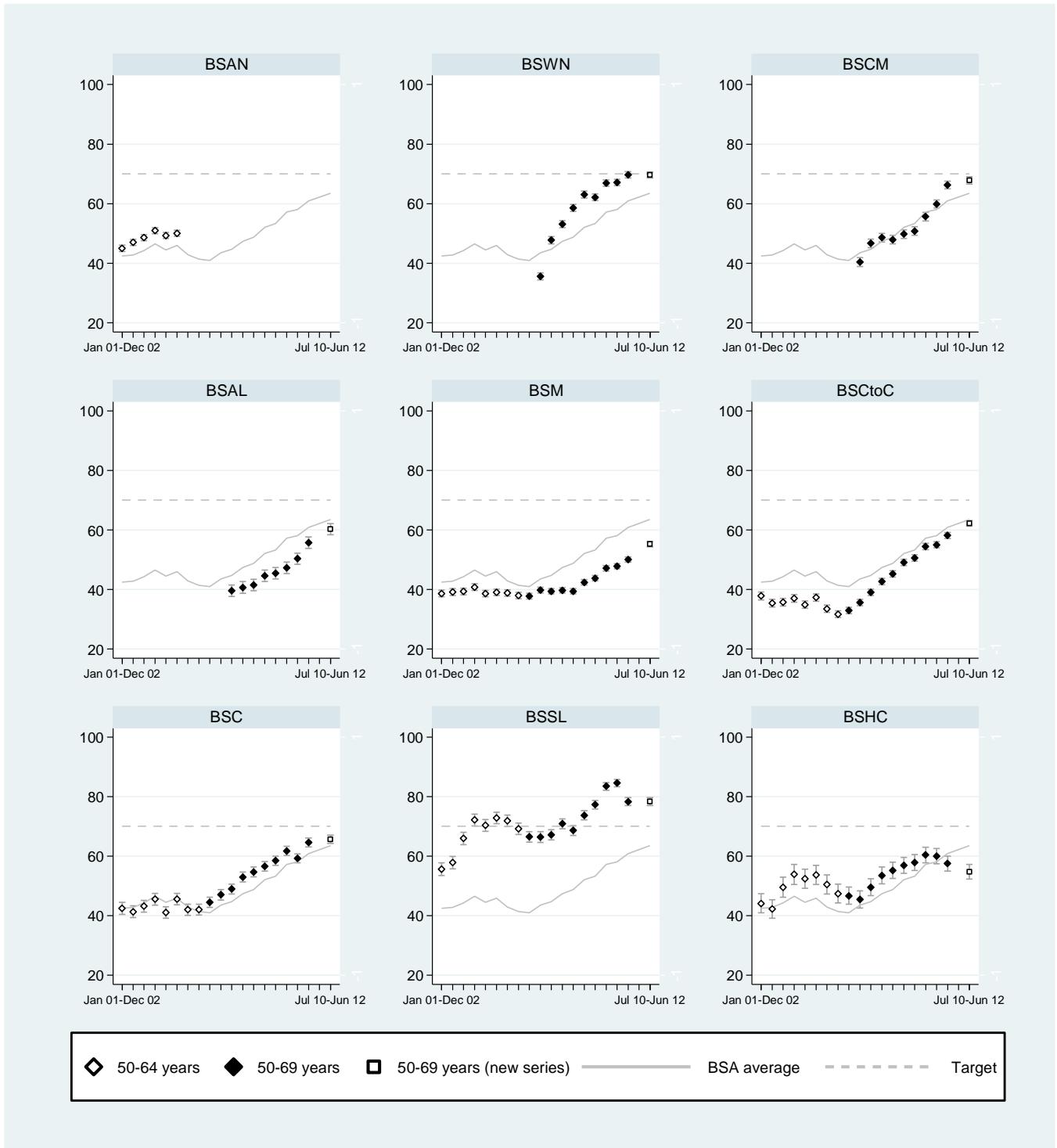
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

Figure 1a7.1: Trends in 6 month coverage for Māori



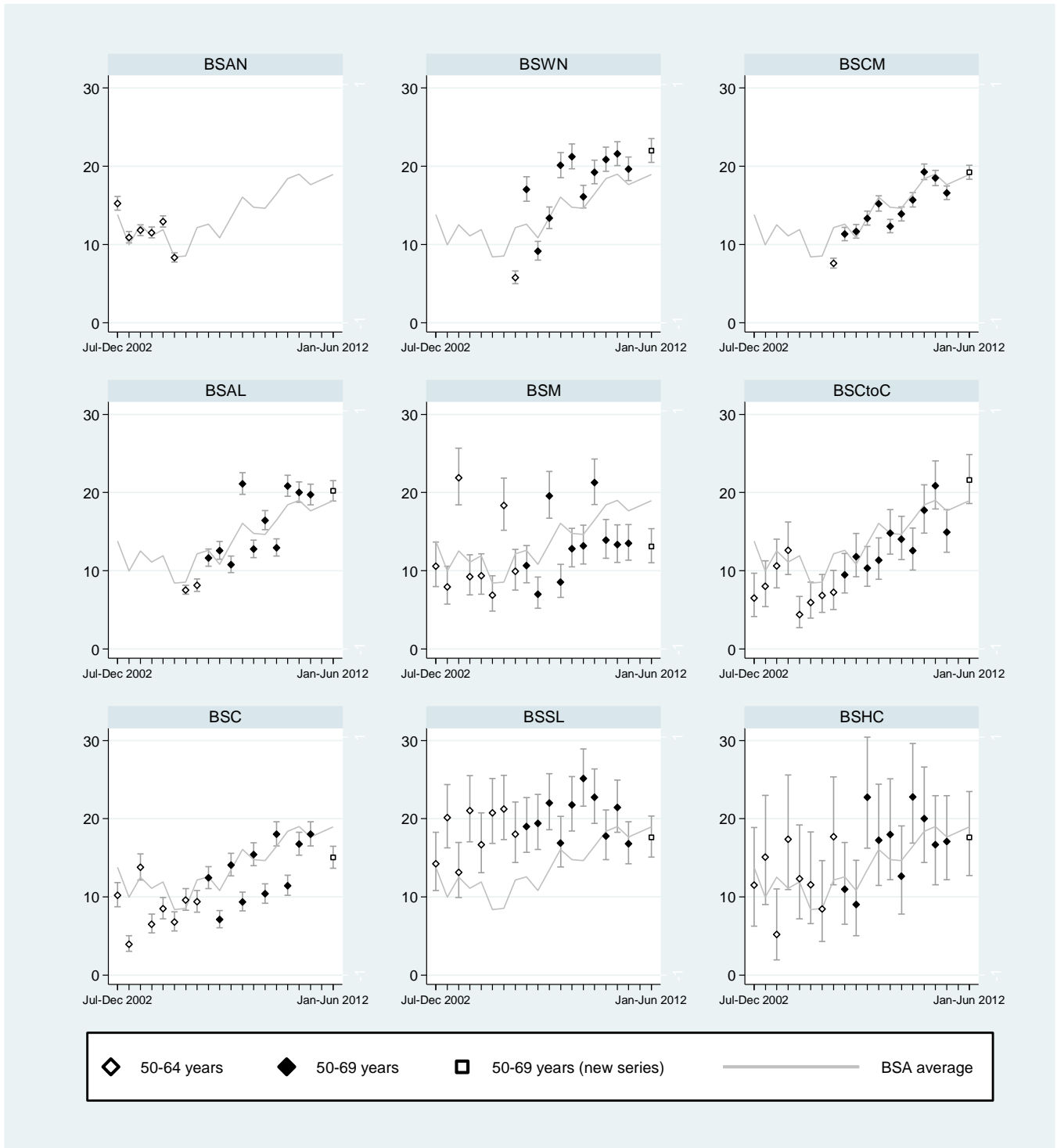
Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

Figure 1a7.1: Trends in biennial coverage for Māori



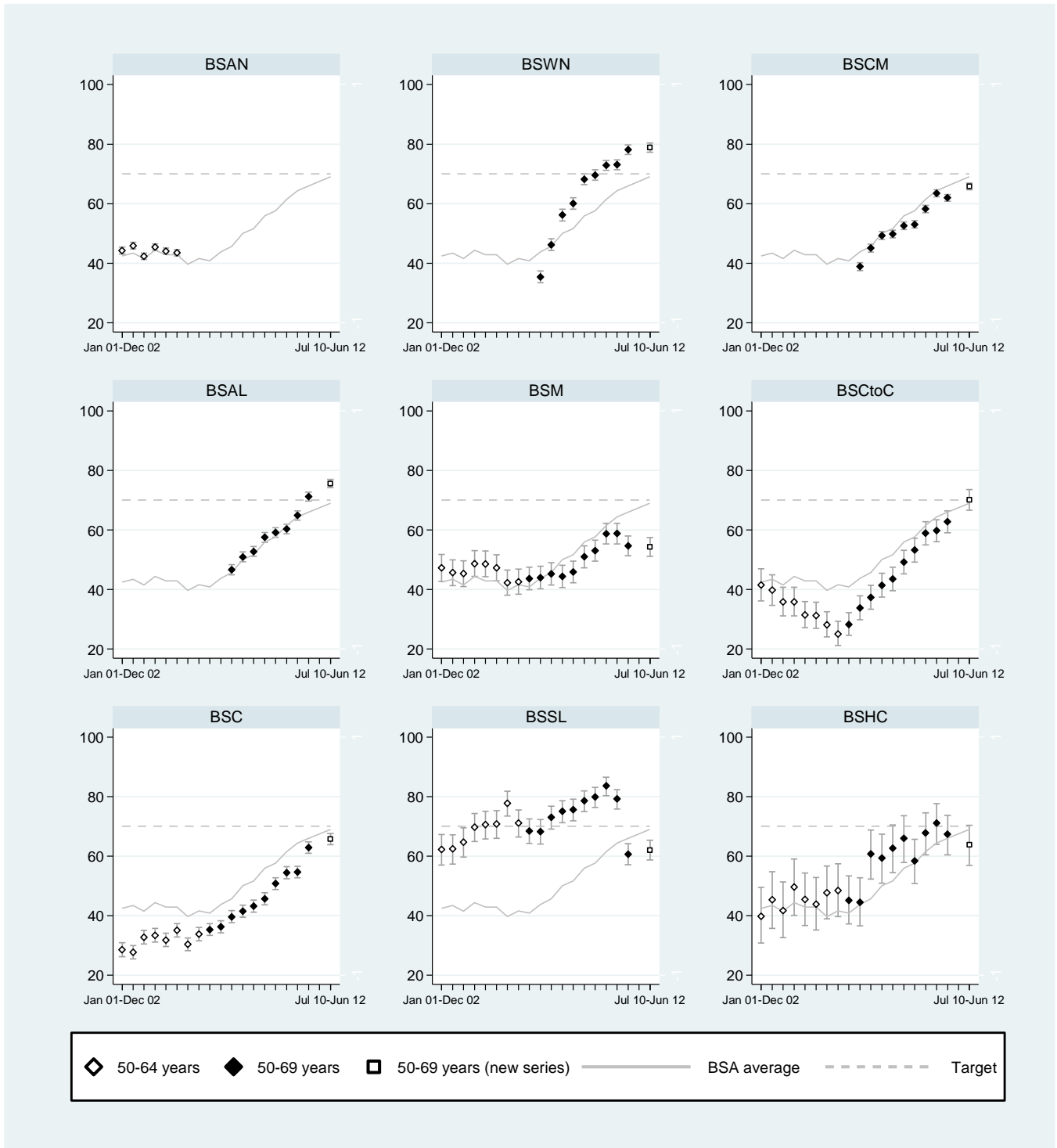
Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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



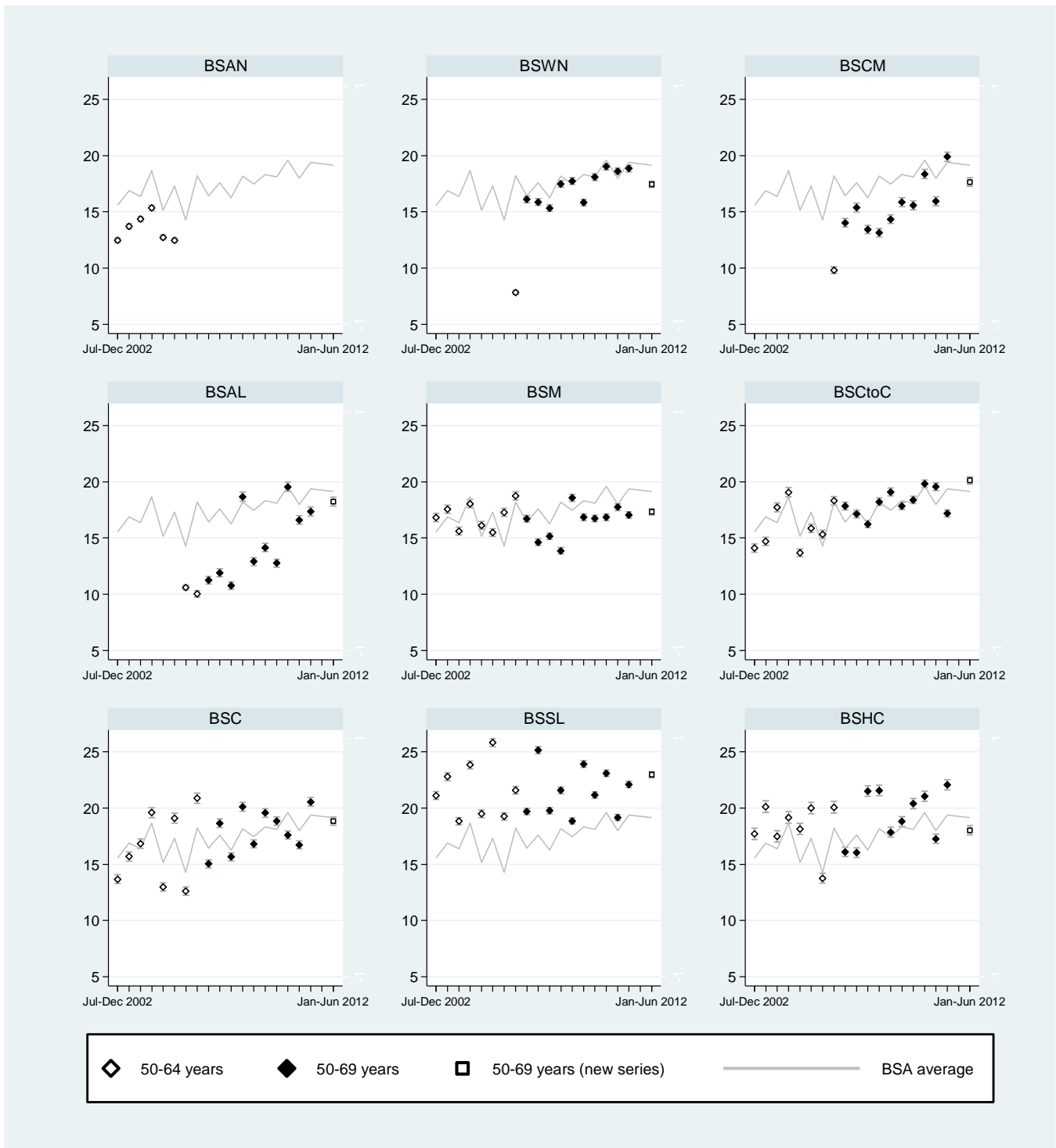
Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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



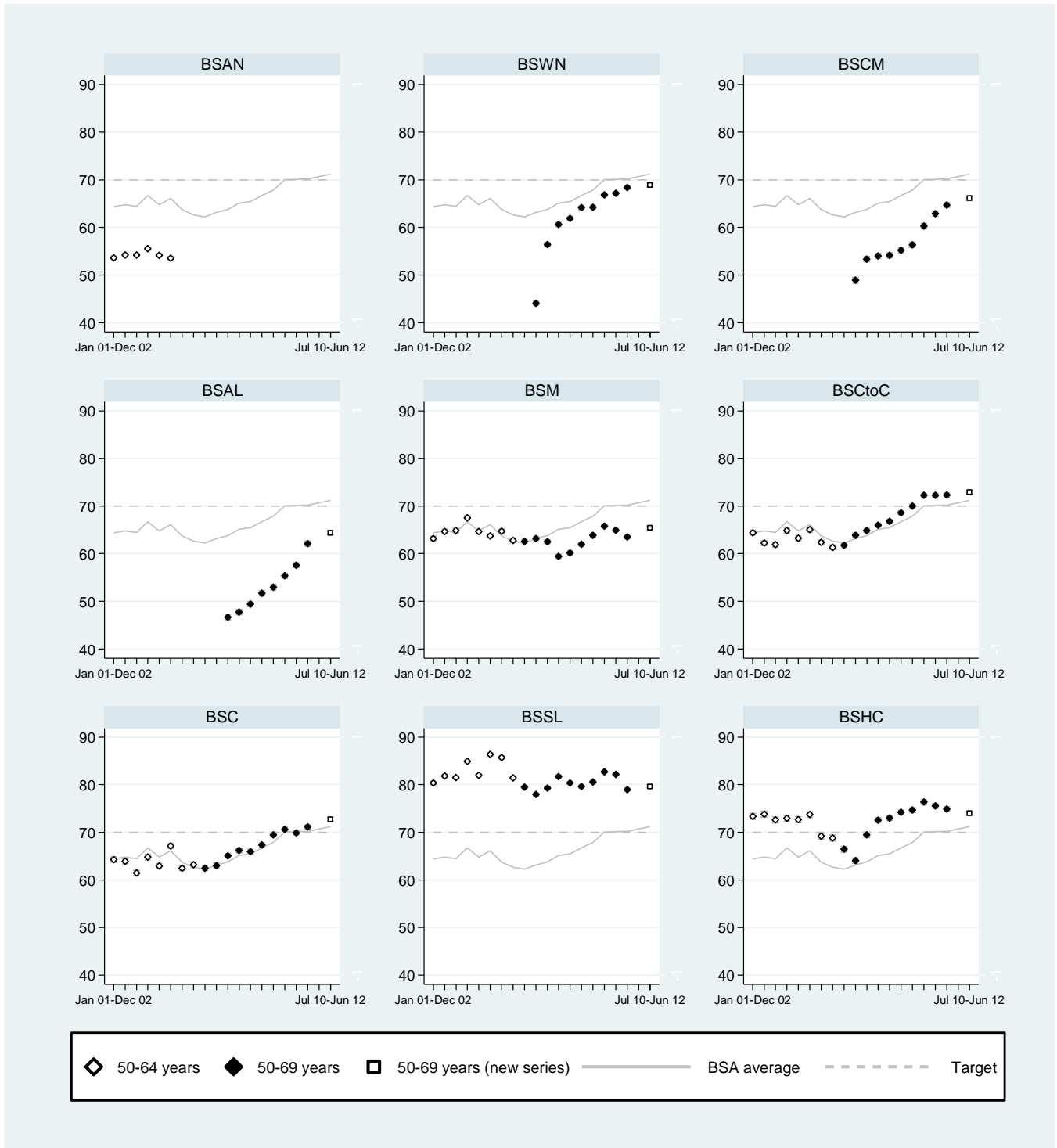
Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period January 2010-December 2011. Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

1.b. Routine re-screening

The re-screening indicator remains under review and is not presented in this report

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

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

The re-screening indicator remains under review and is not presented in this report

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

The re-screening indicator remains under review and is not presented in this report

2. PROVISION OF HIGH QUALITY SCREENING AND ASSESSMENT

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

Description:

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

Target:

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

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

	Fixed site			Mobile site		
	Women having ≤ 4 films	Women screened	% (95%CI)	Women having ≤ 4 films	Women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	3,358	3,788	88.6 (87.6-89.6)	1,143	1,254	91.1 (89.4-92.7)
BSCM	2,359	2,886	81.7 (80.3-83.1)	589	670	87.9 (85.2-90.3)
BSAL	1,921	2,163	88.8 (87.4-90.1)	869	958	90.7 (88.7-92.5)
BSM	2,688	2,942	91.4 (90.3-92.4)	1,004	1,154	87.0 (84.9-88.9)
BSCtoC	2,604	2,856	91.2 (90.1-92.2)	492	565	87.1 (84.0-89.7)
BSC	1,597	1,888	84.6 (82.9-86.2)	1,045	1,121	93.2 (91.6-94.6)
BSSL	5,241	5,978	87.7 (86.8-88.5)	542	593	91.4 (88.8-93.5)
BSHC	768	859	89.4 (87.2-91.4)	402	431	93.3 (90.5-95.4)
BSA Total	20,536	23,360	87.9 (87.5-88.3)	6,086	6,746	90.2 (89.5-90.9)
<i>50-69 years</i>						
BSWN	9,292	10,503	88.5 (87.8-89.1)	3,396	3,848	88.3 (87.2-89.3)
BSCM	5,459	6,979	78.2 (77.2-79.2)	1,686	1,946	86.6 (85.0-88.1)
BSAL	5,061	5,654	89.5 (88.7-90.3)	2,059	2,317	88.9 (87.5-90.1)
BSM	8,233	8,924	92.3 (91.7-92.8)	4,385	4,891	89.7 (88.8-90.5)
BSCtoC	9,924	10,953	90.6 (90.0-91.1)	1,832	2,175	84.2 (82.6-85.7)
BSC	4,713	5,487	85.9 (84.9-86.8)	3,779	4,071	92.8 (92.0-93.6)
BSSL	16,407	18,693	87.8 (87.3-88.2)	1,956	2,137	91.5 (90.3-92.7)
BSHC	3,689	4,332	85.2 (84.1-86.2)	1,839	2,014	91.3 (90.0-92.5)
BSA Total	62,778	71,525	87.8 (87.5-88.0)	20,932	23,399	89.5 (89.1-89.8)

Description:

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

Target:

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

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

	Fixed site			Mobile site		
	Women having ≤ 4 films	Women screened	% (95%CI)	Women having ≤ 4 films	Women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	14,204	16,015	88.7 (88.2-89.2)	3,375	3,843	87.8 (86.7-88.8)
BSCM	8,054	10,089	79.8 (79.0-80.6)	2,513	2,805	89.6 (88.4-90.7)
BSAL	7,109	7,987	89.0 (88.3-89.7)	2,774	3,124	88.8 (87.6-89.9)
BSM	9,387	10,338	90.8 (90.2-91.4)	3,996	4,501	88.8 (87.8-89.7)
BSCtoC	10,795	11,795	91.5 (91.0-92.0)	1,521	1,733	87.8 (86.1-89.3)
BSC	6,804	7,990	85.2 (84.4-85.9)	3,497	3,755	93.1 (92.3-93.9)
BSSL	19,584	21,975	89.1 (88.7-89.5)	2,219	2,447	90.7 (89.5-91.8)
BSHC	4,169	4,783	87.2 (86.2-88.1)	2,097	2,238	93.7 (92.6-94.7)
BSA Total	80,106	90,972	88.1 (87.8-88.3)	21,992	24,446	90.0 (89.6-90.3)
<i>50-69 years</i>						
BSWN	39,103	44,482	87.9 (87.6-88.2) ✓✓ *	9,879	11,486	86.0 (85.4-86.6) ✓✓ *
BSCM	19,385	25,055	77.4 (76.8-77.9) ✓ *	6,883	7,708	89.3 (88.6-90.0) ✓✓✓ *
BSAL	18,346	20,482	89.6 (89.1-90.0) ✓✓✓ *	6,948	7,789	89.2 (88.5-89.9) ✓✓✓ *
BSM	31,347	34,105	91.9 (91.6-92.2) ✓✓✓ *	15,595	17,377	89.7 (89.3-90.2) ✓✓✓ *
BSCtoC	36,431	40,164	90.7 (90.4-91.0) ✓✓✓ *	5,588	6,584	84.9 (84.0-85.7) ✓✓ *
BSC	20,917	24,357	85.9 (85.4-86.3) ✓✓ *	11,634	12,553	92.7 (92.2-93.1) ✓✓✓ *
BSSL	57,313	64,189	89.3 (89.0-89.5) ✓✓✓ *	6,968	7,684	90.7 (90.0-91.3) ✓✓✓ *
BSHC	14,558	17,227	84.5 (84.0-85.0) ✓✓ *	8,122	8,805	92.2 (91.7-92.8) ✓✓✓ *
BSA Total	237,400	270,061	87.9 (87.8-88.0) ✓✓ *	71,617	79,986	89.5 (89.3-89.7) ✓✓✓ *

* Statistically different from target value, ns: not significant

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

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

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

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

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

2.b. Technical recall rate

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

Target:

Fixed: <0.5%

Mobile: <3%

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

	Fixed site			Mobile site		
	Women having technical recall	Women screened	% (95%CI)	Women having technical recall	Women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	1	3,722	0.0 (0.0-0.1)	0	1,320	0.0 (0.0-0.3)
BSCM	8	2,860	0.3 (0.1-0.6)	18	700	2.6 (1.5-4.1)
BSAL	7	2,134	0.3 (0.1-0.7)	40	997	4.0 (2.9-5.5)
BSM	29	2,895	1.0 (0.7-1.4)	67	1,202	5.6 (4.3-7.1)
BSCtoC	1	2,850	0.0 (0.0-0.2)	13	571	2.3 (1.2-3.9)
BSC	19	1,857	1.0 (0.6-1.6)	31	1,161	2.7 (1.8-3.8)
BSSL	19	5,974	0.3 (0.2-0.5)	8	604	1.3 (0.6-2.6)
BSHC	0	840	0.0 (0.0-0.4)	15	450	3.3 (1.9-5.5)
BSA Total	84	23,132	0.4 (0.3-0.4)	192	7,005	2.7 (2.4-3.2)
<i>50-69 years</i>						
BSWN	4	10,402	0.0 (0.0-0.1)	4	3,950	0.1 (0.0-0.3)
BSCM	3	6,938	0.0 (0.0-0.1)	47	1,989	2.4 (1.7-3.1)
BSAL	15	5,598	0.3 (0.1-0.4)	96	2,389	4.0 (3.3-4.9)
BSM	73	8,826	0.8 (0.6-1.0)	229	4,998	4.6 (4.0-5.2)
BSCtoC	18	10,921	0.2 (0.1-0.3)	78	2,209	3.5 (2.8-4.4)
BSC	23	5,432	0.4 (0.3-0.6)	104	4,149	2.5 (2.0-3.0)
BSSL	20	18,677	0.1 (0.1-0.2)	15	2,163	0.7 (0.4-1.1)
BSHC	3	4,300	0.1 (0.0-0.2)	81	2,047	4.0 (3.1-4.9)
BSA Total	159	71,094	0.2 (0.2-0.3)	654	23,894	2.7 (2.5-3.0)

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

	Fixed site			Mobile site		
	Women having technical recall	Women screened	% (95%CI)	Women having technical recall	Women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	9	15,799	0.1 (0.0-0.1)	1	4,060	0.0 (0.0-0.1)
BSCM	22	9,993	0.2 (0.1-0.3)	60	2,912	2.1 (1.6-2.7)
BSAL	25	7,887	0.3 (0.2-0.5)	132	3,247	4.1 (3.4-4.8)
BSM	79	10,167	0.8 (0.6-1.0)	223	4,685	4.8 (4.2-5.4)
BSCtoC	25	11,774	0.2 (0.1-0.3)	52	1,755	3.0 (2.2-3.9)
BSC	69	7,889	0.9 (0.7-1.1)	160	3,895	4.1 (3.5-4.8)
BSSL	58	21,953	0.3 (0.2-0.3)	26	2,493	1.0 (0.7-1.5)
BSHC	1	4,698	0.0 (0.0-0.1)	61	2,325	2.6 (2.0-3.4)
BSA Total	288	90,160	0.3 (0.3-0.4)	715	25,372	2.8 (2.6-3.0)
<i>50-69 years</i>						
BSWN	10	44,165	0.0 (0.0-0.0) ✓✓✓ *	6	11,805	0.1 (0.0-0.1) ✓✓✓ *
BSCM	13	24,887	0.1 (0.0-0.1) ✓✓✓ *	145	7,881	1.8 (1.6-2.2) ✓✓✓ *
BSAL	45	20,313	0.2 (0.2-0.3) ✓✓✓ *	273	7,991	3.4 (3.0-3.8) *** *
BSM	243	33,769	0.7 (0.6-0.8) *** *	743	17,744	4.2 (3.9-4.5) *** *
BSCtoC	85	40,104	0.2 (0.2-0.3) ✓✓✓ *	229	6,649	3.4 (3.0-3.9) *** *
BSC	117	24,146	0.5 (0.4-0.6) ✓ ns	386	12,826	3.0 (2.7-3.3) ✓ ns
BSSL	106	64,127	0.2 (0.1-0.2) ✓✓✓ *	128	7,787	1.6 (1.4-2.0) ✓✓✓ *
BSHC	9	17,081	0.1 (0.0-0.1) ✓✓✓ *	275	8,958	3.1 (2.7-3.5) ✓ ns
BSA Total	628	268,592	0.2 (0.2-0.3) ✓✓✓ *	2,185	81,641	2.7 (2.6-2.8) ✓✓✓ *

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

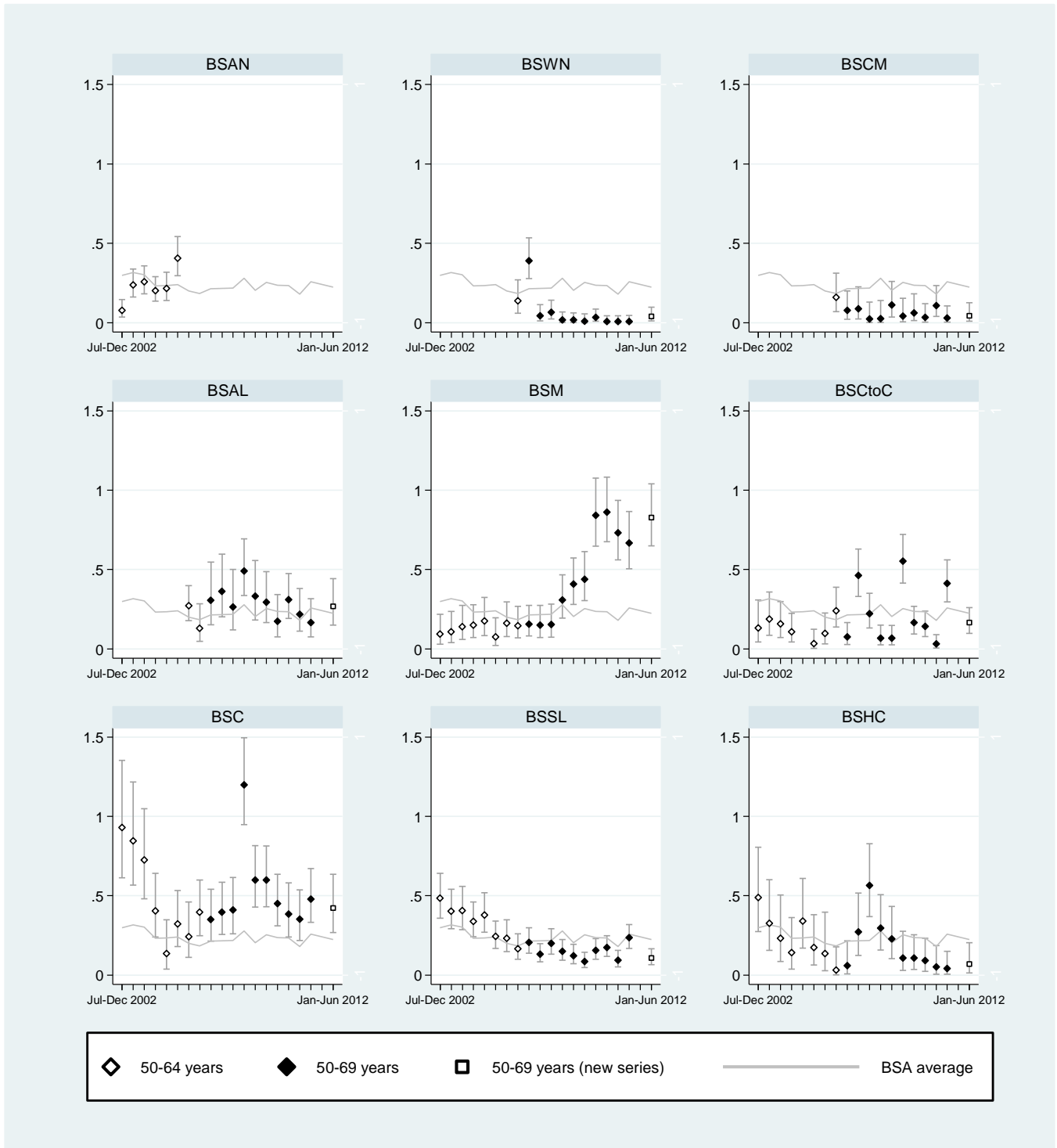
✓✓ Difference of ≥ 5-9% magnitude better than target value and statistically significant

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

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

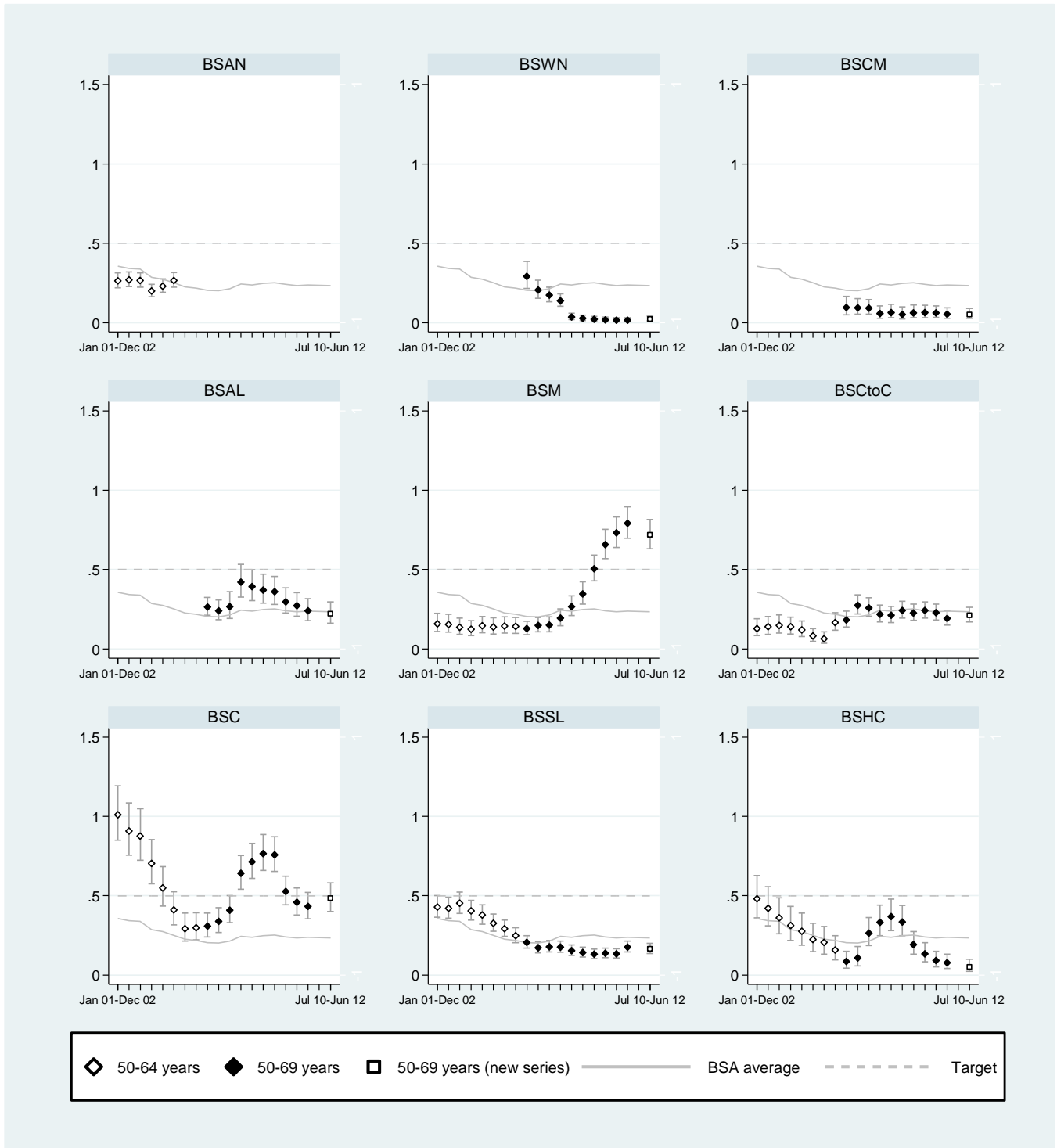
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

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



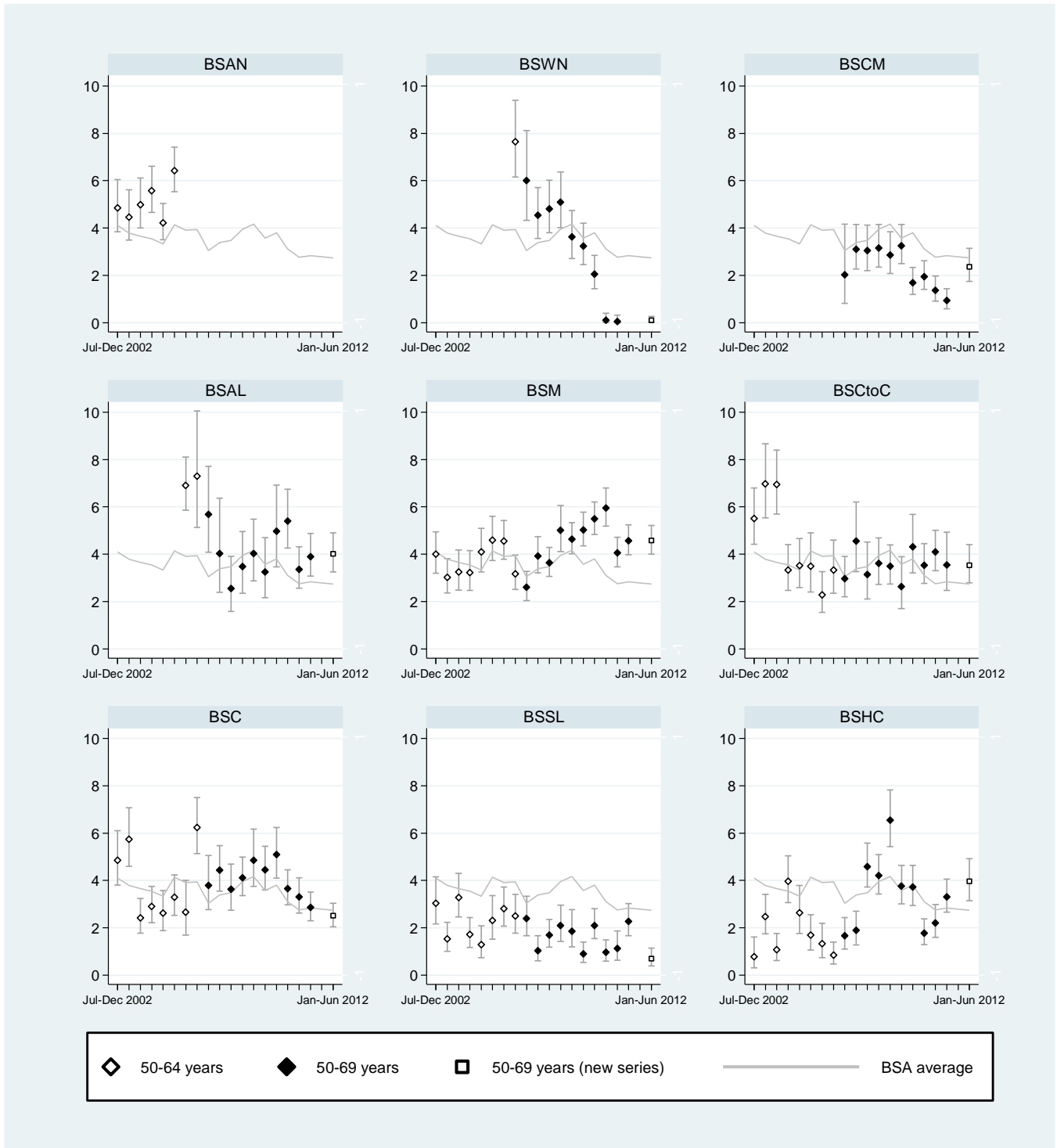
Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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



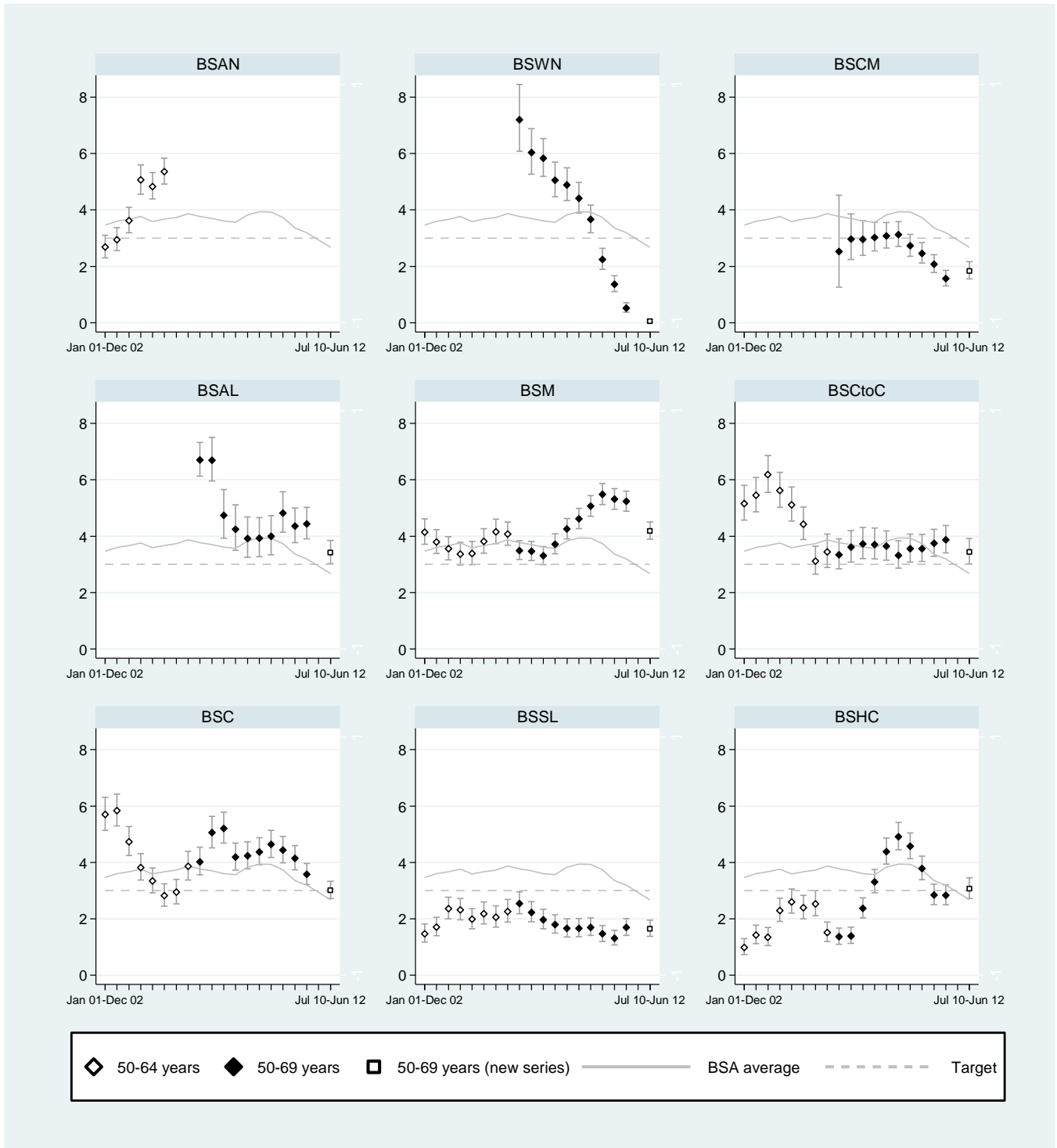
Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

2.c. Technical reject rate

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

Target:

Fixed: <3%

Mobile: <3%

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

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

	Fixed site			Mobile site		
	Films rejected	Total films taken	% (95%CI)	Films rejected	Total films taken	% (95%CI)
<i>45-49 years</i>						
BSWN	174	15,958	1.1 (0.9-1.3)	48	5,220	0.9 (0.7-1.2)
BSCM	146	12,420	1.2 (1.0-1.4)	3	2,796	0.1 (0.0-0.3)
BSAL	53	9,207	0.6 (0.4-0.8)	0	3,944	0.0 (0.0-0.1)
BSM	82	12,245	0.7 (0.5-0.8)	12	4,702	0.3 (0.1-0.4)
BSCtoC	63	11,812	0.5 (0.4-0.7)	0	2,357	0.0 (0.0-0.2)
BSC	119	7,968	1.5 (1.2-1.8)	2	4,551	0.0 (0.0-0.2)
BSSL	141	25,054	0.6 (0.5-0.7)	7	2,451	0.3 (0.1-0.6)
BSHC	24	3,576	0.7 (0.4-1.0)	0	1,730	0.0 (0.0-0.2)
BSA Total	802	98,240	0.8 (0.8-0.9)	72	27,751	0.3 (0.2-0.3)
<i>50-69 years</i>						
BSWN	462	43,865	1.1 (1.0-1.2)	147	16,088	0.9 (0.8-1.1)
BSCM	370	30,407	1.2 (1.1-1.3)	16	8,129	0.2 (0.1-0.3)
BSAL	74	23,643	0.3 (0.2-0.4)	3	9,591	0.0 (0.0-0.1)
BSM	203	36,653	0.6 (0.5-0.6)	26	19,828	0.1 (0.1-0.2)
BSCtoC	262	45,249	0.6 (0.5-0.7)	11	9,068	0.1 (0.1-0.2)
BSC	321	23,042	1.4 (1.2-1.6)	5	16,548	0.0 (0.0-0.1)
BSSL	425	77,862	0.5 (0.5-0.6)	31	8,791	0.4 (0.2-0.5)
BSHC	142	18,234	0.8 (0.7-0.9)	5	8,135	0.1 (0.0-0.1)
BSA Total	2,259	298,955	0.8 (0.7-0.8)	244	96,178	0.3 (0.2-0.3)

Poisson 95% confidence intervals presented

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

Target:

Fixed: <3%

Mobile: <3%

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

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

	Fixed site			Mobile site		
	Films rejected	Total films taken	% (95%CI)	Films rejected	Total films taken	% (95%CI)
<i>45-49 years</i>						
BSWN	672	67,292	1.0 (0.9-1.1)	155	16,163	1.0 (0.8-1.1)
BSCM	517	43,808	1.2 (1.1-1.3)	24	11,643	0.2 (0.1-0.3)
BSAL	216	33,821	0.6 (0.6-0.7)	2	12,863	0.0 (0.0-0.1)
BSM	364	43,089	0.8 (0.8-0.9)	26	18,333	0.1 (0.1-0.2)
BSCtoC	269	48,742	0.6 (0.5-0.6)	3	7,196	0.0 (0.0-0.1)
BSC	478	33,710	1.4 (1.3-1.6)	31	15,202	0.2 (0.1-0.3)
BSSL	575	91,654	0.6 (0.6-0.7)	33	10,142	0.3 (0.2-0.5)
BSHC	173	20,090	0.9 (0.7-1.0)	6	9,050	0.1 (0.0-0.1)
BSA Total	3,264	382,206	0.9 (0.8-0.9)	280	100,592	0.3 (0.2-0.3)
<i>50-69 years</i>						
BSWN	1,763	186,277	0.9 (0.9-1.0) ✓✓✓ *	436	48,320	0.9 (0.8-1.0) ✓✓✓ *
BSCM	1,371	109,279	1.3 (1.2-1.3) ✓✓✓ *	42	31,961	0.1 (0.1-0.2) ✓✓✓ *
BSAL	398	85,667	0.5 (0.4-0.5) ✓✓✓ *	6	32,072	0.0 (0.0-0.0) ✓✓✓ *
BSM	990	140,351	0.7 (0.7-0.8) ✓✓✓ *	84	70,474	0.1 (0.1-0.1) ✓✓✓ *
BSCtoC	979	165,833	0.6 (0.6-0.6) ✓✓✓ *	15	27,485	0.1 (0.0-0.1) ✓✓✓ *
BSC	1,239	102,283	1.2 (1.1-1.3) ✓✓✓ *	45	50,868	0.1 (0.1-0.1) ✓✓✓ *
BSSL	1,496	266,051	0.6 (0.5-0.6) ✓✓✓ *	84	31,618	0.3 (0.2-0.3) ✓✓✓ *
BSHC	705	72,726	1.0 (0.9-1.0) ✓✓✓ *	28	35,573	0.1 (0.1-0.1) ✓✓✓ *
BSA Total	8,941	1,128,467	0.8 (0.8-0.8) ✓✓✓ *	740	328,371	0.2 (0.2-0.2) ✓✓✓ *

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)
<i>45-49 years</i>						
BSWN	260	2,504	10.4 (9.2-11.7)	130	2,538	5.1 (4.3-6.1)
BSCM	165	1,749	9.4 (8.0-11.0)	81	1,811	4.5 (3.6-5.6)
BSAL	103	1,333	7.7 (6.3-9.4)	59	1,798	3.3 (2.5-4.2)
BSM	216	2,164	10.0 (8.7-11.4)	85	1,933	4.4 (3.5-5.4)
BSCtoC	80	1,535	5.2 (4.1-6.5)	47	1,886	2.5 (1.8-3.3)
BSC	118	1,408	8.4 (6.9-10.0)	62	1,610	3.9 (3.0-4.9)
BSSL	255	2,815	9.1 (8.0-10.2)	196	3,763	5.2 (4.5-6.0)
BSHC	46	562	8.2 (6.0-10.9)	40	728	5.5 (3.9-7.5)
BSA Total	1,243	14,070	8.8 (8.4-9.3)	700	16,067	4.4 (4.0-4.7)
<i>50-69 years</i>						
BSWN	151	1,265	11.9 (10.1-14.0)	445	13,087	3.4 (3.1-3.7)
BSCM	93	977	9.5 (7.7-11.7)	247	7,950	3.1 (2.7-3.5)
BSAL	60	868	6.9 (5.3-8.9)	202	7,119	2.8 (2.5-3.3)
BSM	127	1,234	10.3 (8.6-12.2)	399	12,590	3.2 (2.9-3.5)
BSCtoC	79	800	9.9 (7.8-12.3)	234	12,330	1.9 (1.7-2.2)
BSC	55	634	8.7 (6.5-11.3)	258	8,947	2.9 (2.5-3.3)
BSSL	52	615	8.5 (6.3-11.1)	658	20,225	3.3 (3.0-3.5)
BSHC	20	238	8.4 (5.1-13.0)	180	6,109	2.9 (2.5-3.4)
BSA Total	637	6,631	9.6 (8.9-10.4)	2623	88,357	3.0 (2.9-3.1)

Poisson 95% confidence intervals presented

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

Description:

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

Target:

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

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

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

	Initial			Subsequent						
	Referral to assessment	Women screened	% (95%CI)	Referral to assessment	Women screened	% (95%CI)				
<i>45-49 years</i>										
BSWN	1,053	9,744	10.8 (10.2-11.5)	456	10,115	4.5 (4.1-4.9)				
BSCM	679	7,069	9.6 (8.9-10.4)	249	5,836	4.3 (3.8-4.8)				
BSAL	392	5,495	7.1 (6.4-7.9)	192	5,639	3.4 (2.9-3.9)				
BSM	779	7,817	10.0 (9.3-10.7)	316	7,035	4.5 (4.0-5.0)				
BSCtoC	372	6,077	6.1 (5.5-6.8)	168	7,452	2.3 (1.9-2.6)				
BSC	448	5,654	7.9 (7.2-8.7)	238	6,130	3.9 (3.4-4.4)				
BSSL	805	9,402	8.6 (8.0-9.2)	716	15,044	4.8 (4.4-5.1)				
BSHC	284	3,020	9.4 (8.3-10.6)	166	4,003	4.1 (3.5-4.8)				
BSA Total	4,812	54,278	8.9 (8.6-9.1)	2,501	61,254	4.1 (3.9-4.2)				
<i>50-69 years</i>										
BSWN	706	5,558	12.7 (11.8-13.7)	xxx	*	1,586	50,412	3.1 (3.0-3.3)	✓✓✓	*
BSCM	508	4,606	11.0 (10.1-12.0)	xxx	*	905	28,162	3.2 (3.0-3.4)	✓✓✓	*
BSAL	284	3,908	7.3 (6.4-8.2)	✓✓✓	*	663	24,396	2.7 (2.5-2.9)	✓✓✓	*
BSM	471	4,882	9.6 (8.8-10.6)	✓	ns	1,503	46,631	3.2 (3.1-3.4)	✓✓✓	*
BSCtoC	278	3,409	8.2 (7.2-9.2)	✓✓✓	*	741	43,344	1.7 (1.6-1.8)	✓✓✓	*
BSC	275	2,923	9.4 (8.3-10.6)	✓	ns	941	34,049	2.8 (2.6-2.9)	✓✓✓	*
BSSL	170	2,186	7.8 (6.7-9.0)	✓✓✓	*	2,229	69,728	3.2 (3.1-3.3)	✓✓✓	*
BSHC	116	1,221	9.5 (7.9-11.4)	✓	ns	762	24,818	3.1 (2.9-3.3)	✓✓✓	*
BSA Total	2,808	28,693	9.8 (9.4-10.2)	✓	ns	9,330	321,540	2.9 (2.8-3.0)	✓✓✓	*

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

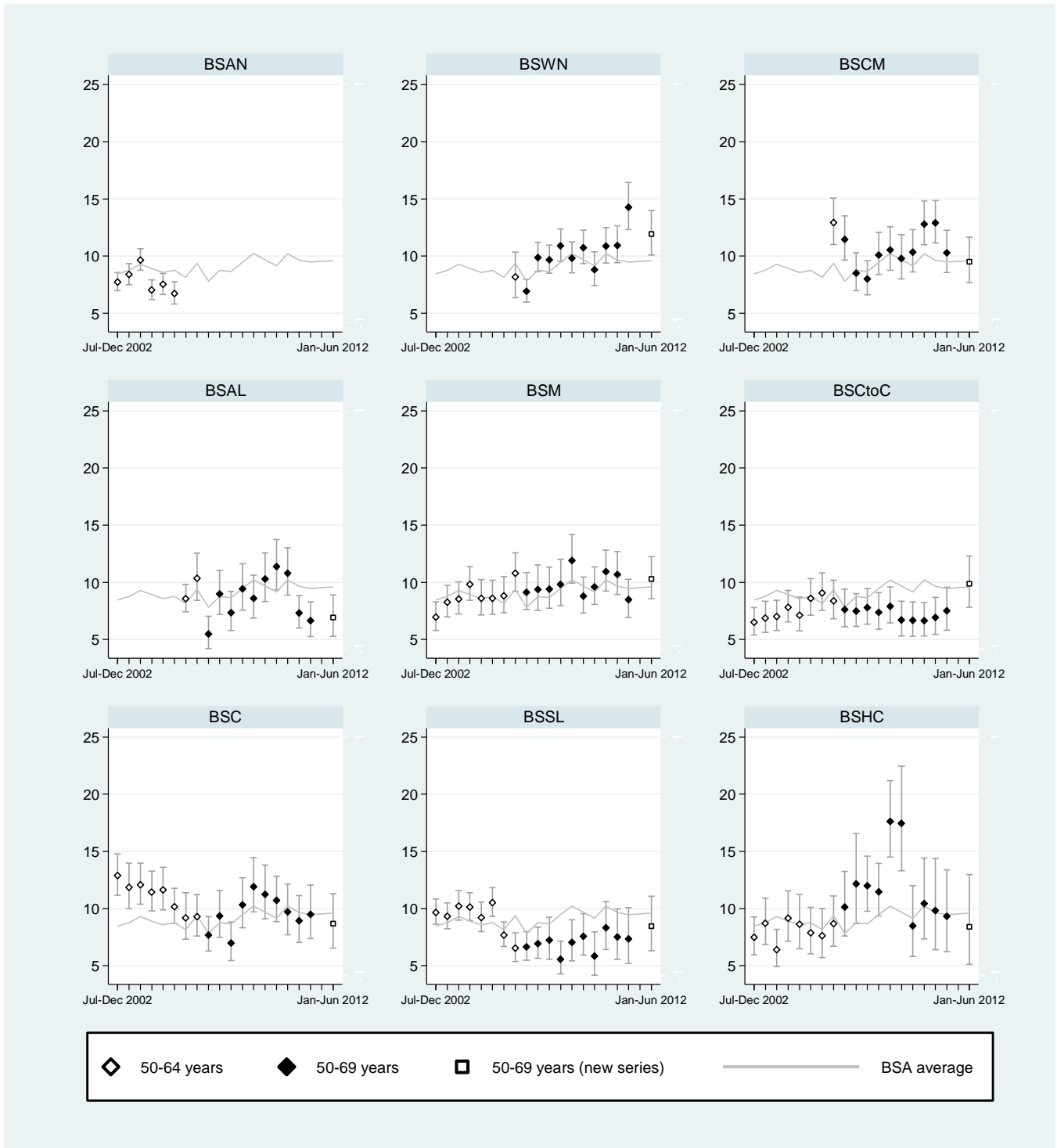
✓✓ Difference of ≥ 5-9% magnitude better than target value and statistically significant

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

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

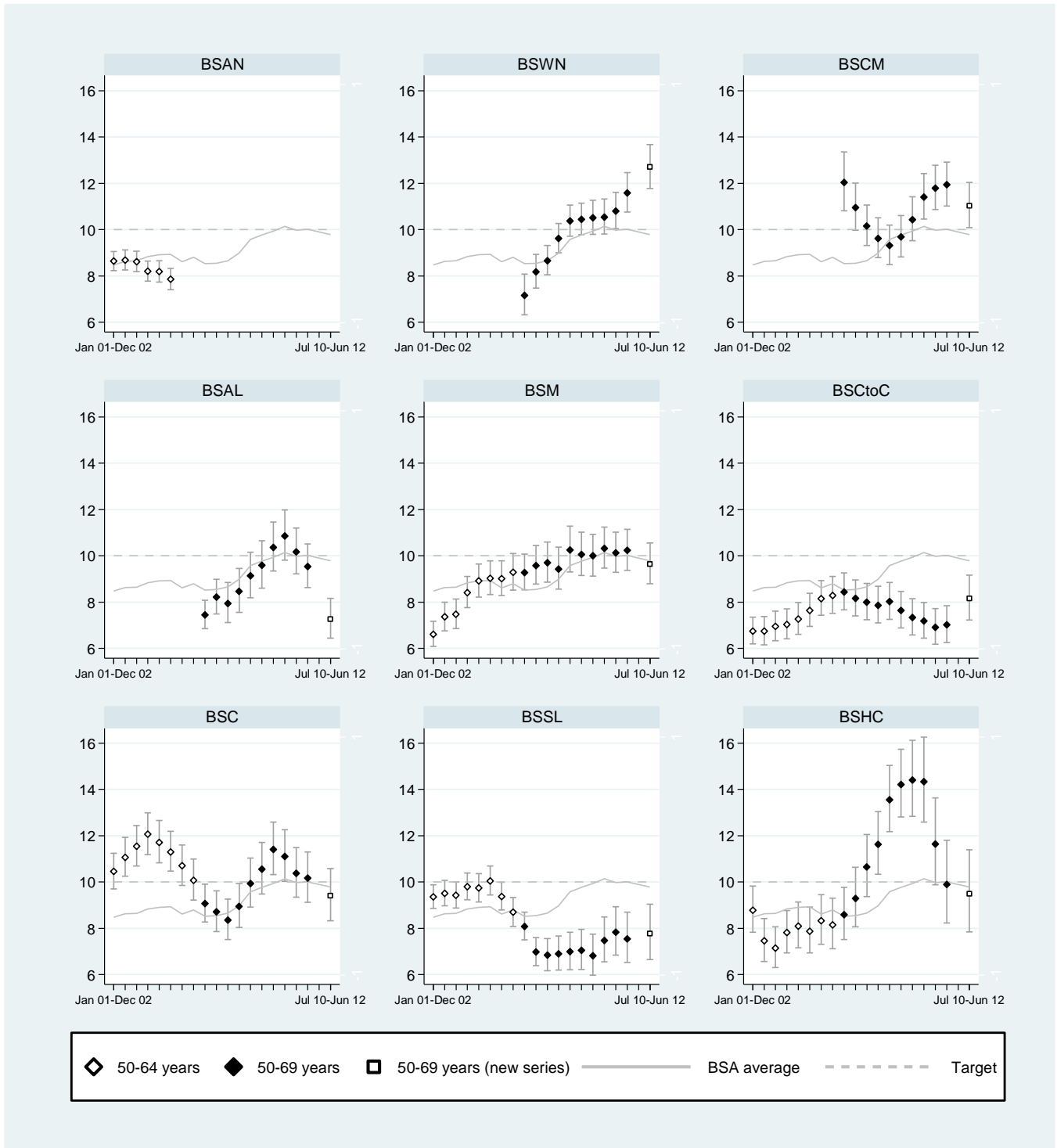
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

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



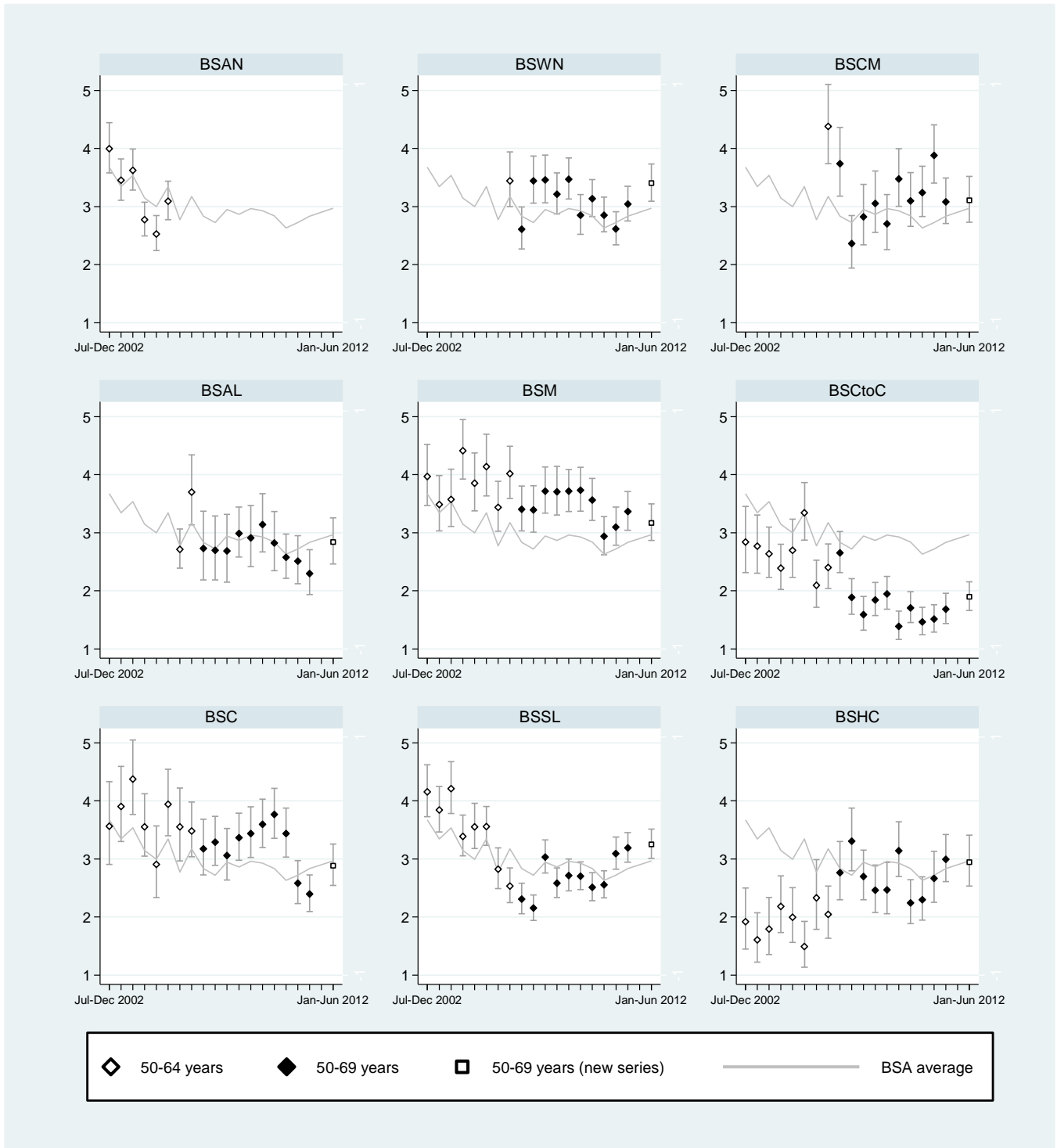
Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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



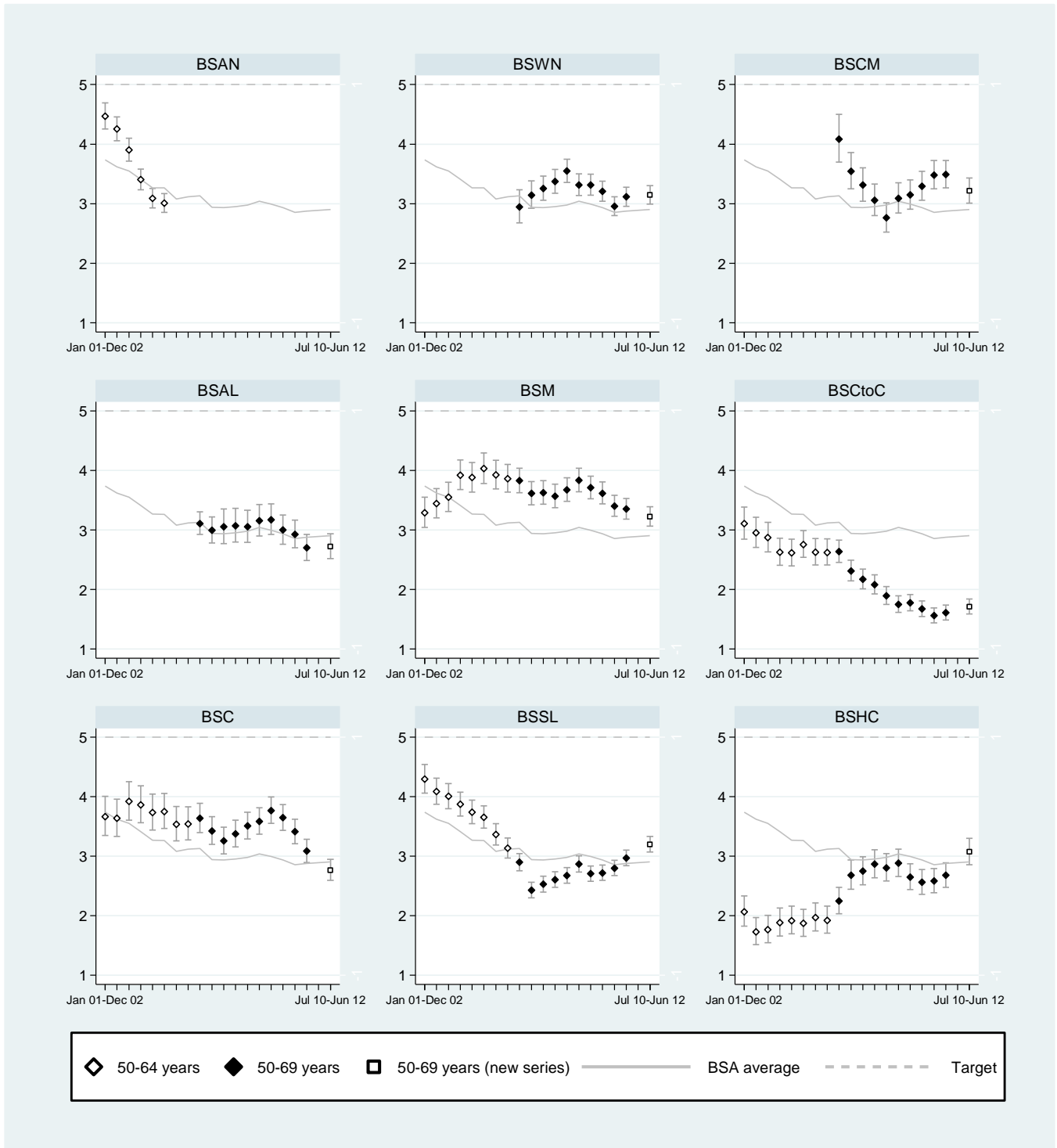
Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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)
<i>45-49 years</i>						
BSWN	232	2,504	9.3 (8.2-10.5)	118	2,538	4.6 (3.9-5.5)
BSCM	150	1,749	8.6 (7.3-10.0)	76	1,811	4.2 (3.3-5.2)
BSAL	96	1,333	7.2 (5.9-8.7)	51	1,798	2.8 (2.1-3.7)
BSM	195	2,164	9.0 (7.8-10.3)	80	1,933	4.1 (3.3-5.1)
BSCtoC	79	1,535	5.1 (4.1-6.4)	38	1,886	2.0 (1.4-2.8)
BSC	110	1,408	7.8 (6.5-9.3)	56	1,610	3.5 (2.6-4.5)
BSSL	242	2,815	8.6 (7.6-9.7)	175	3,763	4.7 (4.0-5.4)
BSHC	46	562	8.2 (6.1-10.8)	34	728	4.7 (3.3-6.5)
BSA Total	1,150	14,070	8.2 (7.7-8.6)	628	16,067	3.9 (3.6-4.2)
<i>50-69 years</i>						
BSWN	138	1,265	10.9 (9.2-12.8)	360	13,087	2.8 (2.5-3.0)
BSCM	76	977	7.8 (6.2-9.6)	188	7,950	2.4 (2.0-2.7)
BSAL	48	868	5.5 (4.1-7.3)	161	7,119	2.3 (1.9-2.6)
BSM	111	1,234	9.0 (7.5-10.7)	324	12,590	2.6 (2.3-2.9)
BSCtoC	68	800	8.5 (6.7-10.7)	165	12,330	1.3 (1.1-1.6)
BSC	49	634	7.7 (5.8-10.1)	204	8,947	2.3 (2.0-2.6)
BSSL	48	615	7.8 (5.8-10.2)	566	20,225	2.8 (2.6-3.0)
BSHC	18	238	7.6 (4.5-11.7)	148	6,109	2.4 (2.1-2.8)
BSA Total	556	6,631	8.4 (7.7-9.1)	2,116	88,357	2.4 (2.3-2.5)

Exact binomial 95% confidence intervals presented

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

Description:

Measures the proportion of women who are recalled to assessment, but after assessment are found not to have cancer (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)	
<i>45-49 years</i>							
BSWN	975	9,744	10.0 (9.4-10.6)	418	10,115	4.1 (3.8-4.5)	
BSCM	617	7,069	8.7 (8.1-9.4)	222	5,836	3.8 (3.3-4.3)	
BSAL	360	5,495	6.6 (5.9-7.2)	161	5,639	2.9 (2.4-3.3)	
BSM	726	7,817	9.3 (8.7-10.0)	290	7,035	4.1 (3.7-4.6)	
BSCtoC	342	6,077	5.6 (5.1-6.2)	140	7,452	1.9 (1.6-2.2)	
BSC	407	5,654	7.2 (6.5-7.9)	216	6,130	3.5 (3.1-4.0)	
BSSL	768	9,402	8.2 (7.6-8.7)	663	15,044	4.4 (4.1-4.7)	
BSHC	266	3,020	8.8 (7.8-9.9)	144	4,003	3.6 (3.0-4.2)	
BSA Total	4,461	54,278	8.2 (8.0-8.5)	2,254	61,254	3.7 (3.5-3.8)	
<i>50-69 years</i>							
BSWN	617	5,558	11.1 (10.3-12.0)	1,275	50,412	2.5 (2.4-2.7)	✓✓✓ *
BSCM	418	4,606	9.1 (8.3-9.9)	697	28,162	2.5 (2.3-2.7)	✓✓✓ *
BSAL	212	3,908	5.4 (4.7-6.2)	521	24,396	2.1 (2.0-2.3)	✓✓✓ *
BSM	413	4,882	8.5 (7.7-9.3)	1,208	46,631	2.6 (2.4-2.7)	✓✓✓ *
BSCtoC	234	3,409	6.9 (6.0-7.8)	504	43,344	1.2 (1.1-1.3)	✓✓✓ *
BSC	230	2,923	7.9 (6.9-8.9)	743	34,049	2.2 (2.0-2.3)	✓✓✓ *
BSSL	141	2,186	6.5 (5.5-7.6)	1,863	69,728	2.7 (2.6-2.8)	✓✓✓ *
BSHC	105	1,221	8.6 (7.1-10.3)	614	24,818	2.5 (2.3-2.7)	✓✓✓ *
BSA Total	2,370	28,693	8.3 (7.9-8.6)	7,425	321,540	2.3 (2.3-2.4)	✓✓✓ *

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 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 number with diagnosed cancer as a percentage of the number referred to assessment.

Target:

≥ 9%.

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)
<i>45-49 years</i>						
BSWN	20	260	7.7 (4.8-11.6)	9	130	6.9 (3.2-12.7)
BSCM	11	165	6.7 (3.4-11.6)	4	81	4.9 (1.4-12.2)
BSAL	4	103	3.9 (1.1-9.6)	8	59	13.6 (6.0-25.0)
BSM	18	216	8.3 (5.0-12.9)	4	85	4.7 (1.3-11.6)
BSCtoC	1	80	1.3 (0.0-6.8)	9	47	19.1 (9.1-33.3)
BSC	7	118	5.9 (2.4-11.8)	6	62	9.7 (3.6-19.9)
BSSL	10	255	3.9 (1.9-7.1)	21	196	10.7 (6.8-15.9)
BSHC	0	46	0.0 (0.0-7.7)	4	40	10.0 (2.8-23.7)
BSA Total	71	1,243	5.7 (4.5-7.2)	65	700	9.3 (7.2-11.7)
<i>50-69 years</i>						
BSWN	10	151	6.6 (3.2-11.8)	77	445	17.3 (13.9-21.1)
BSCM	10	93	10.8 (5.3-18.9)	55	247	22.3 (17.2-28.0)
BSAL	10	60	16.7 (8.3-28.5)	36	202	17.8 (12.8-23.8)
BSM	15	127	11.8 (6.8-18.7)	70	399	17.5 (13.9-21.6)
BSCtoC	8	79	16.3 (8.9-26.2)	64	234	27.4 (21.7-33.5)
BSC	6	55	10.9 (4.1-22.2)	49	258	19.0 (14.4-24.3)
BSSL	2	52	3.8 (0.5-13.2)	89	658	13.5 (11.0-16.4)
BSHC	2	20	10.0 (1.2-31.7)	27	180	15.0 (10.1-21.1)
BSA Total	63	637	9.9 (7.7-12.5)	467	2,623	17.8 (16.4-19.3)

Exact binomial 95% confidence intervals presented

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

Description:

The number with diagnosed cancer as a percentage of the number referred to assessment.

Target:

≥ 9%.

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)				
<i>45-49 years</i>										
BSWN	57	1,053	5.4 (4.1-7.0)	34	456	7.5 (5.2-10.3)				
BSCM	39	679	5.7 (4.1-7.8)	20	249	8.0 (5.0-12.1)				
BSAL	22	392	5.6 (3.6-8.4)	29	192	15.1 (10.4-21.0)				
BSM	45	779	5.8 (4.2-7.7)	25	316	7.9 (5.2-11.5)				
BSCtoC	25	372	6.7 (4.4-9.8)	25	168	14.9 (9.9-21.2)				
BSC	36	448	8.0 (5.7-11.0)	22	238	9.2 (5.9-13.7)				
BSSL	30	805	3.7 (2.5-5.3)	50	716	7.0 (5.2-9.1)				
BSHC	13	284	4.6 (2.5-7.7)	19	166	11.4 (7.0-17.3)				
BSA Total	267	4,812	5.5 (4.9-6.2)	224	2,501	9.0 (7.9-10.1)				
<i>50-69 years</i>										
BSWN	66	706	9.3 (7.3-11.7)	✓	ns	280	1,586	17.7 (15.8-19.6)	✓✓✓	*
BSCM	57	508	11.2 (8.6-14.3)	✓	ns	195	905	21.5 (18.9-24.4)	✓✓✓	*
BSAL	52	284	18.3 (14.0-23.3)	✓✓✓	*	129	663	19.5 (16.5-22.7)	✓✓✓	*
BSM	53	471	11.3 (8.5-14.5)	✓	ns	285	1,503	19.0 (17.0-21.0)	✓✓✓	*
BSCtoC	39	278	14.0 (10.2-18.7)	✓✓✓	*	216	741	29.1 (25.9-32.6)	✓✓✓	*
BSC	40	275	14.5 (10.6-19.3)	✓✓✓	*	179	941	19.0 (16.6-21.7)	✓✓✓	*
BSSL	22	170	12.9 (8.3-18.9)	✓	ns	350	2,229	15.7 (14.2-17.3)	✓✓✓	*
BSHC	11	116	9.5 (4.8-16.3)	✓	ns	133	762	17.5 (14.8-20.3)	✓✓✓	*
BSA Total	340	2,808	12.1 (10.9-13.4)	✓✓✓	*	1,767	9,330	18.9 (18.1-19.7)	✓✓✓	*

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

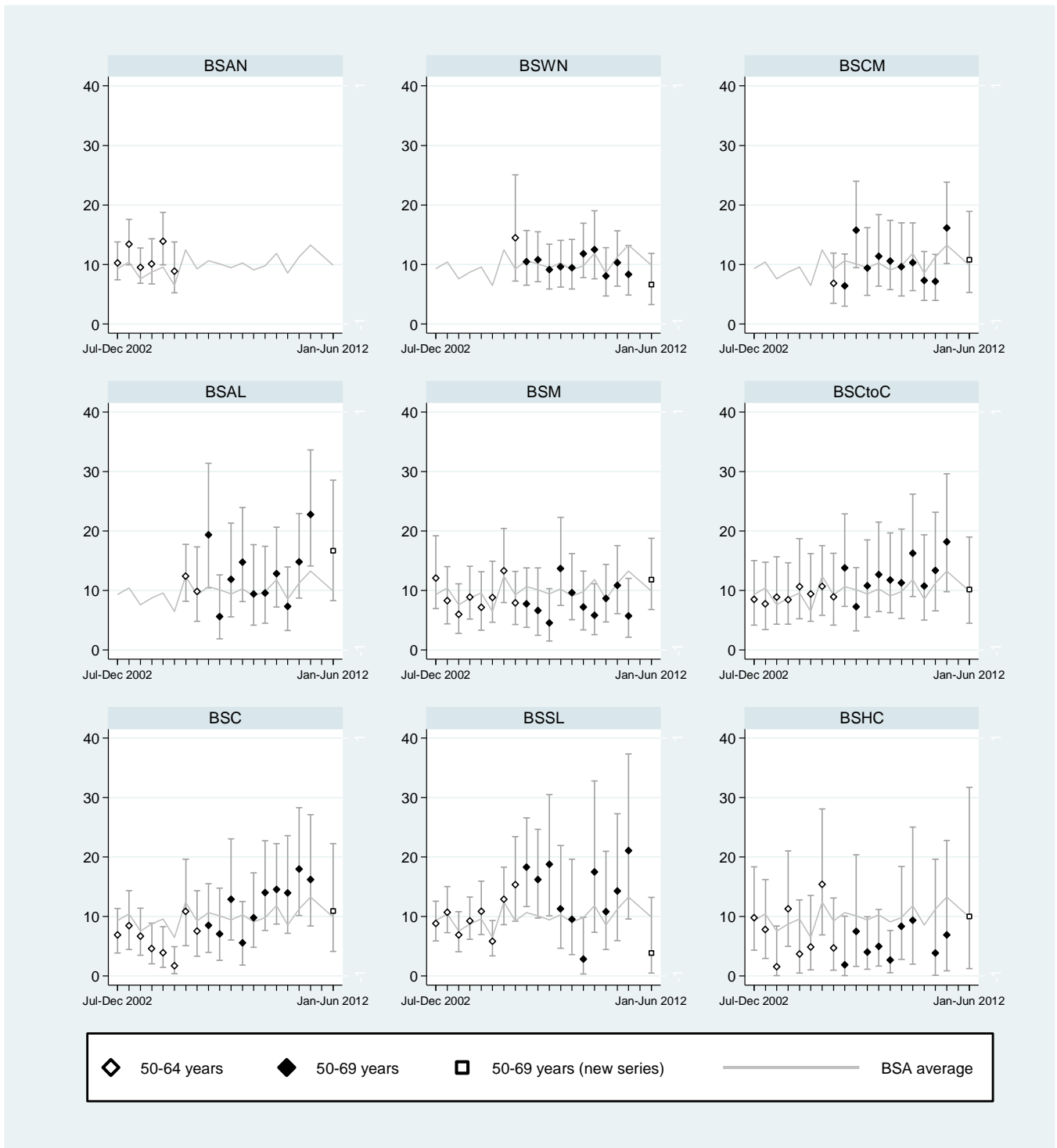
✓✓ Difference of ≥ 5-9% magnitude better than target value and statistically significant

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

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

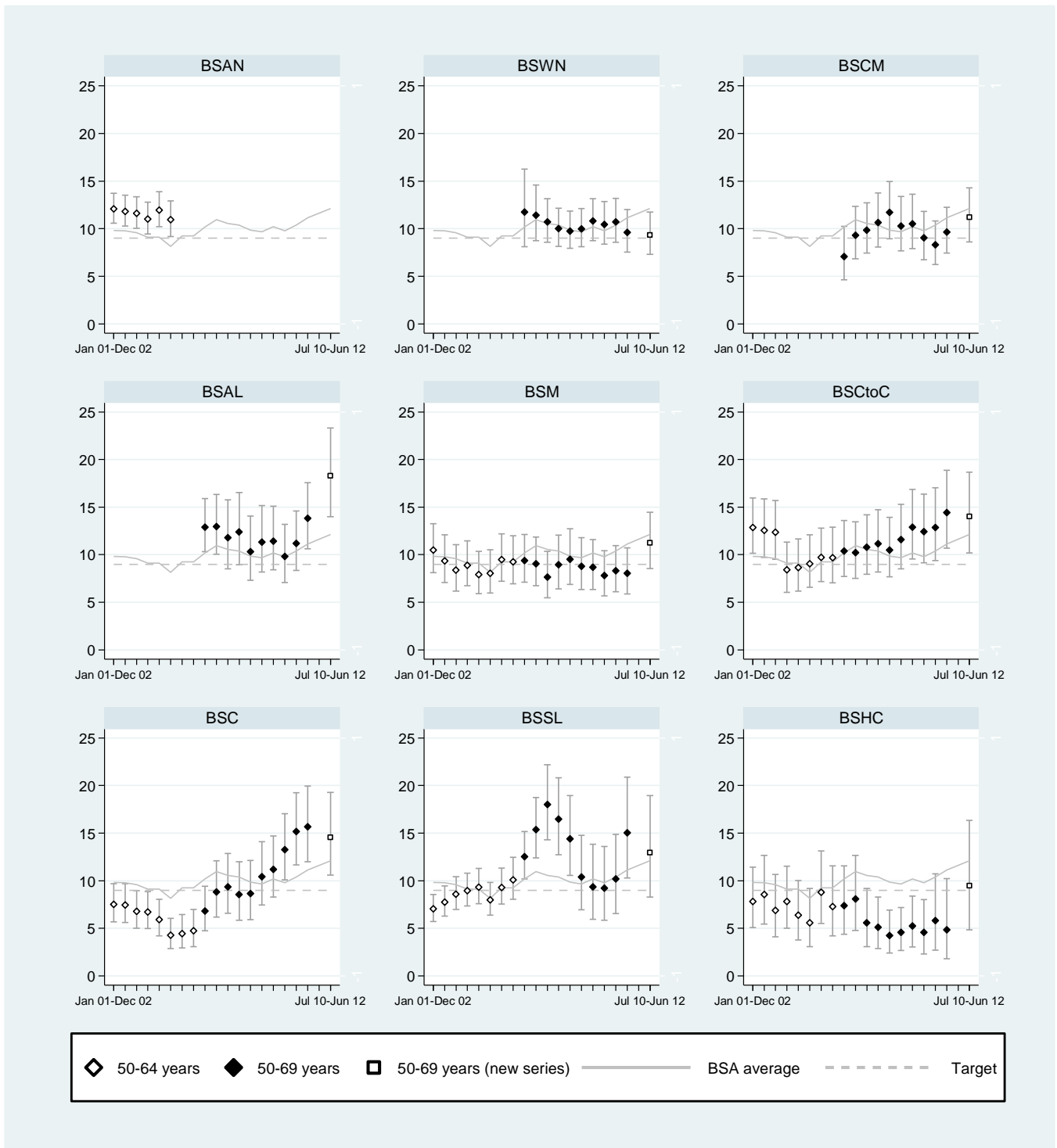
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

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



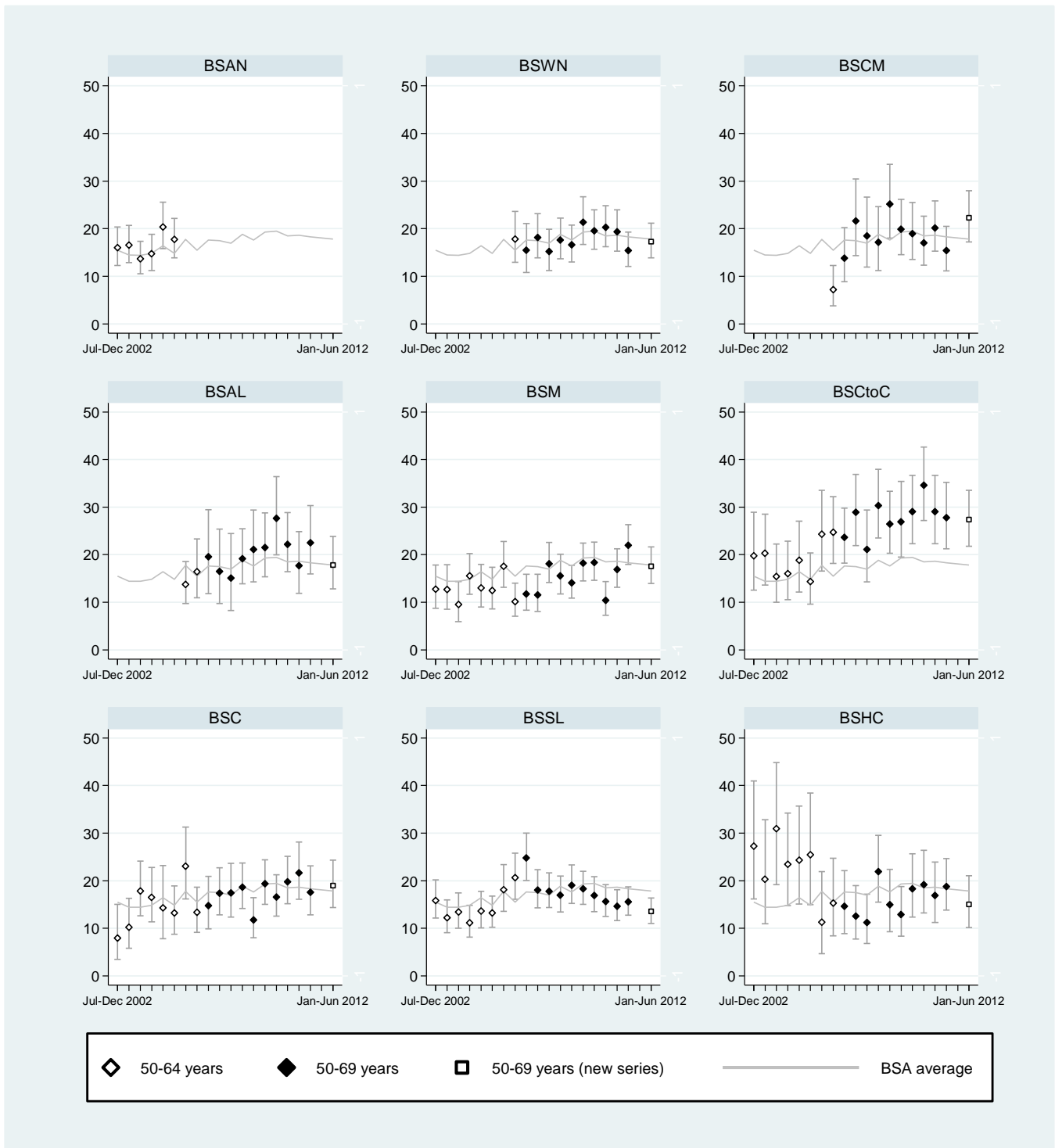
Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

Figure 2f.1b: DCIS and invasive cancers as a percentage of referrals to assessment for initial screens, women 50-69 years, 2 years



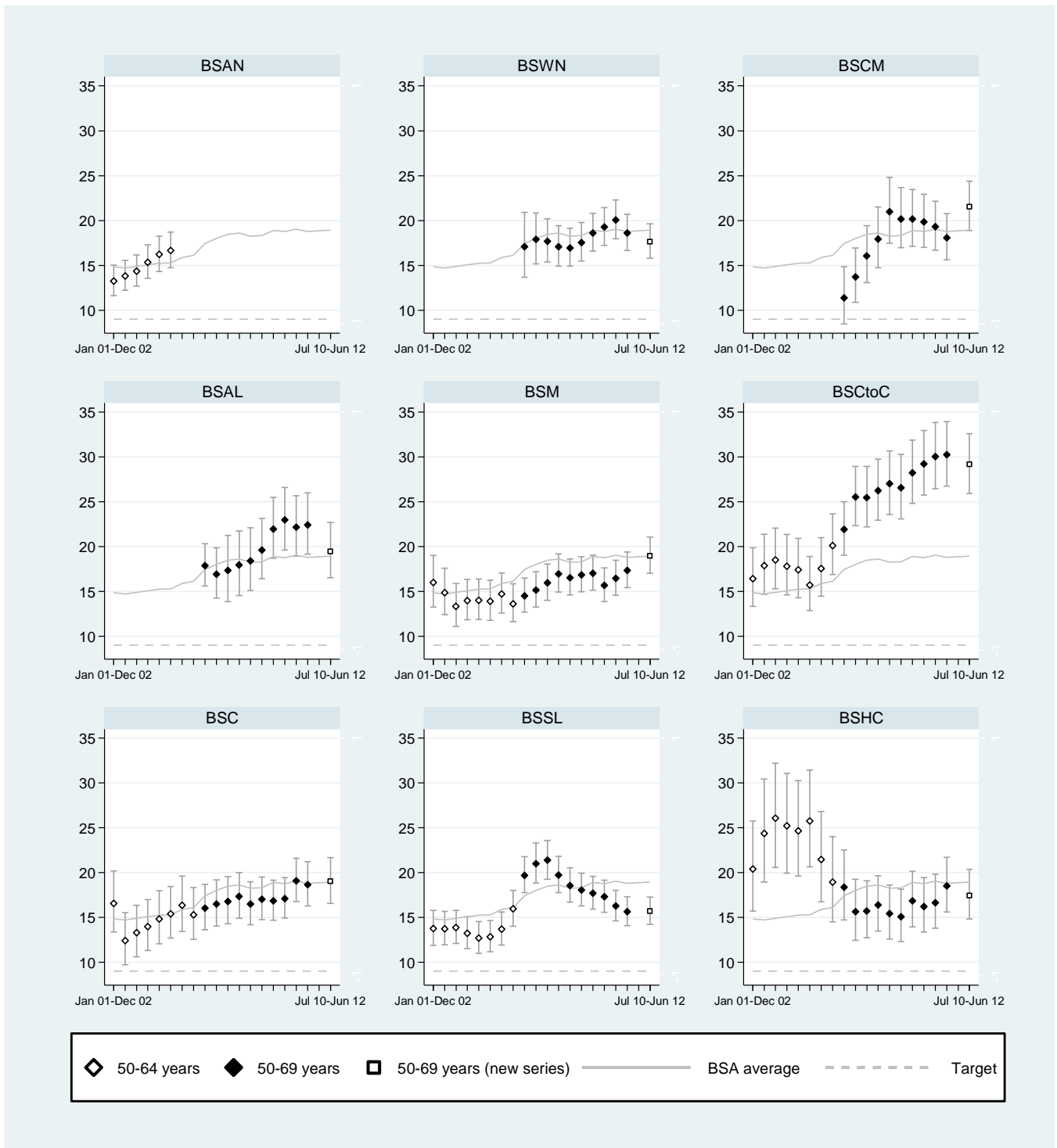
Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

Figure 2f.2a: DCIS and invasive cancers as a percentage of referrals to assessment for subsequent screens, women 50-69 years, 6 months



Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

Figure 2f.2b: DCIS and invasive cancers as a percentage of referrals to assessment for subsequent screens, women 50-69 years, 2 years



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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		30-49 gm		50-69 gm		≥70 gm		Unknown	% (95% CIs)
			gm	% (95% CIs)	gm	% (95% CIs)	gm	% (95% CIs)	gm	% (95% CIs)		
<i>45-49 years</i>												
BSWN	44	37	84.1 (69.9-93.4)		5	11.4 (3.8-24.6)	0	0.0 (0.0-8.0)	0	0.0 (0.0-8.0)	2	4.5 (0.6-15.5)
BSCM	23	20	87.0 (66.4-97.2)		3	13.0 (2.8-33.6)	0	0.0 (0.0-14.8)	0	0.0 (0.0-14.8)	0	0.0 (0.0-14.8)
BSAL	22	18	81.8 (59.7-94.8)		3	13.6 (2.9-34.9)	1	4.5 (0.1-22.8)	0	0.0 (0.0-15.4)	0	0.0 (0.0-15.4)
BSM	28	20	71.4 (51.3-86.8)		6	21.4 (8.3-41.0)	1	3.6 (0.1-18.3)	1	3.6 (0.1-18.3)	0	0.0 (0.0-12.3)
BSCtoC	12	7	58.3 (27.7-84.8)		1	8.3 (0.2-38.5)	0	0.0 (0.0-26.5)	0	0.0 (0.0-26.5)	4	33.3 (9.9-65.1)
BSC	9	7	77.8 (40.0-97.2)		2	22.2 (2.8-60.0)	0	0.0 (0.0-33.6)	0	0.0 (0.0-33.6)	0	0.0 (0.0-33.6)
BSSL	22	16	72.7 (49.8-89.3)		4	18.2 (5.2-40.3)	1	4.5 (0.1-22.8)	1	4.5 (0.1-22.8)	0	0.0 (0.0-15.4)
BSHC	6	5	83.3 (35.9-99.6)		0	0.0 (0.0-45.9)	0	0.0 (0.0-45.9)	1	16.7 (0.4-64.1)	0	0.0 (0.0-45.9)
BSA Total	166	130	78.3 (71.3-84.3)		24	14.5 (9.5-20.7)	3	1.8 (0.4-5.2)	3	1.8 (0.4-5.2)	6	3.6 (1.3-7.7)
<i>50-69 years</i>												
BSWN	61	53	86.9 (75.8-94.2)		5	8.2 (2.7-18.1)	0	0.0 (0.0-5.9)	2	3.3 (0.4-11.3)	1	1.6 (0.0-8.8)
BSCM	27	22	81.5 (61.9-93.7)		3	11.1 (2.4-29.2)	1	3.7 (0.1-19.0)	1	3.7 (0.1-19.0)	0	0.0 (0.0-12.8)
BSAL	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)
BSM	51	38	74.5 (60.4-85.7)		7	13.7 (5.7-26.3)	2	3.9 (0.5-13.5)	3	5.9 (1.2-16.2)	1	2.0 (0.0-10.4)
BSCtoC	15	10	66.7 (38.4-88.2)		2	13.3 (1.7-40.5)	0	0.0 (0.0-21.8)	1	6.7 (0.2-31.9)	2	13.3 (1.7-40.5)
BSC	19	15	78.9 (54.4-93.9)		2	10.5 (1.3-33.1)	1	5.3 (0.1-26.0)	1	5.3 (0.1-26.0)	0	0.0 (0.0-17.6)
BSSL	33	25	75.8 (57.7-88.9)		6	18.2 (7.0-35.5)	1	3.0 (0.1-15.8)	1	3.0 (0.1-15.8)	0	0.0 (0.0-10.6)
BSHC	14	11	78.6 (49.2-95.3)		2	14.3 (1.8-42.8)	0	0.0 (0.0-23.2)	1	7.1 (0.2-33.9)	0	0.0 (0.0-23.2)
BSA Total	239	191	79.9 (74.3-84.8)		29	12.1 (8.3-17.0)	5	2.1 (0.7-4.8)	10	4.2 (2.0-7.6)	4	1.7 (0.5-4.2)

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)
<i>45-49 years</i>						
BSWN	20	29		58	91	63.7 (53.0-73.6)
BSCM	14	15		49	59	83.1 (71.0-91.6)
BSAL	11	12		41	51	80.4 (66.9-90.2)
BSM	20	22		65	70	92.9 (84.1-97.6)
BSCtoC	9	10		47	50	94.0 (83.5-98.7)
BSC	10	13		51	58	87.9 (76.7-95.0)
BSSL	26	31		73	80	91.3 (82.8-96.4)
BSHC	4	4		25	32	78.1 (60.0-90.7)
BSA Total	114	136	83.8 (76.5-89.6)	409	491	83.3 (79.7-86.5)
<i>50-69 years</i>						
BSWN	64	87	73.6 (63.0-82.4) ✓ ns	276	346	79.8 (75.1-83.9) ✓✓✓ *
BSCM	63	65	96.9 (89.3-99.6) ✓✓✓ *	240	252	95.2 (91.8-97.5) ✓✓✓ *
BSAL	36	46	78.3 (63.6-89.1) ✓ ns	135	181	74.6 (67.6-80.8) ✓ ns
BSM	81	85	95.3 (88.4-98.7) ✓✓✓ *	317	338	93.8 (90.7-96.1) ✓✓✓ *
BSCtoC	71	72	98.6 (92.5-100.0) ✓✓✓ *	253	255	99.2 (97.2-99.9) ✓✓✓ *
BSC	52	55	94.5 (84.9-98.9) ✓✓✓ *	206	219	94.1 (90.1-96.8) ✓✓✓ *
BSSL	83	91	91.2 (83.4-96.1) ✓✓✓ *	349	372	93.8 (90.9-96.0) ✓✓✓ *
BSHC	24	29	82.8 (64.2-94.2) ✓ ns	132	144	91.7 (85.9-95.6) ✓✓✓ *
BSA Total	474	530	89.4 (86.5-91.9) ✓✓✓ *	1,908	2,107	90.6 (89.2-91.8) ✓✓✓ *

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

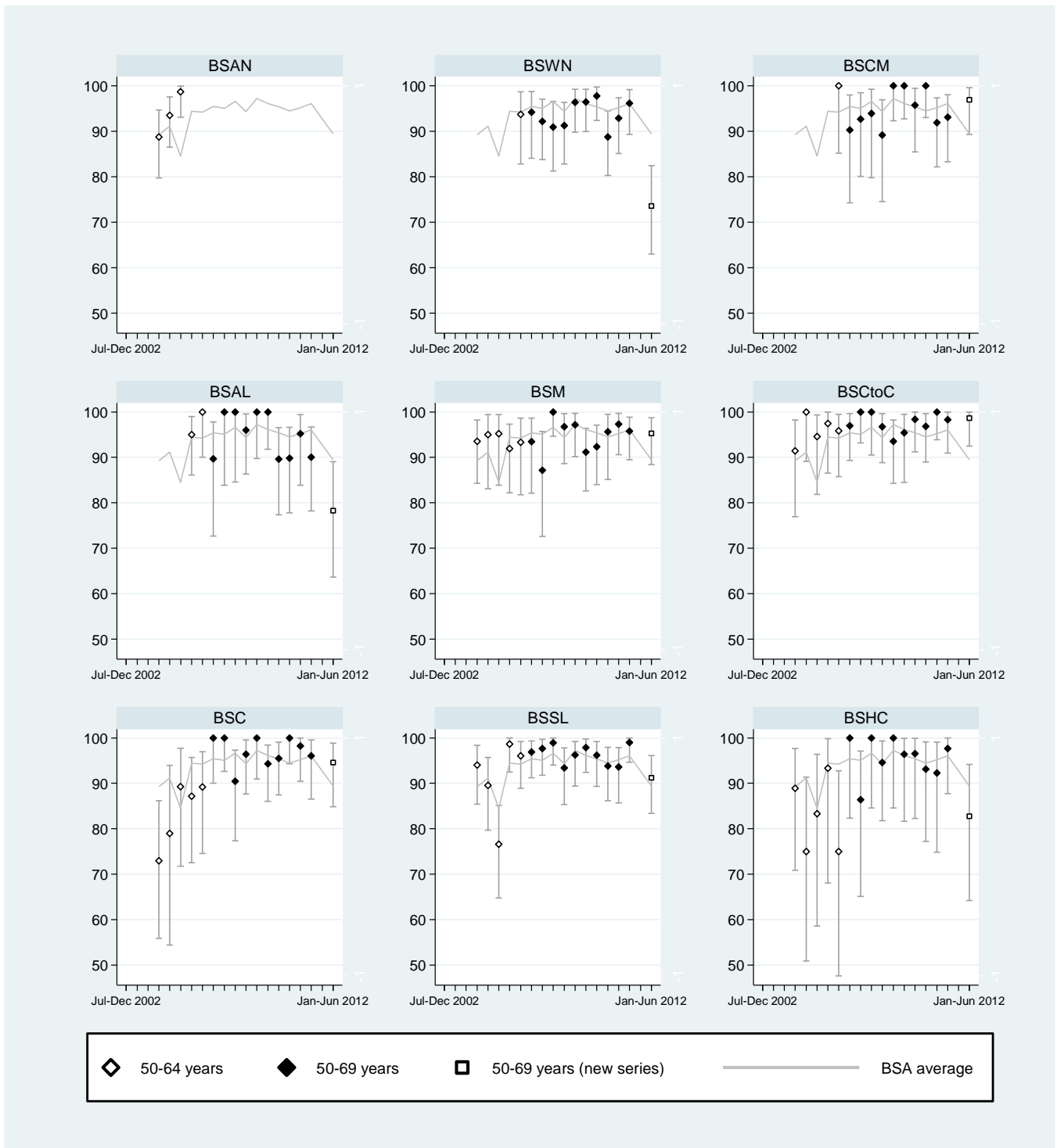
✓✓ Difference of ≥ 5-9% magnitude better than target value and statistically significant

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

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

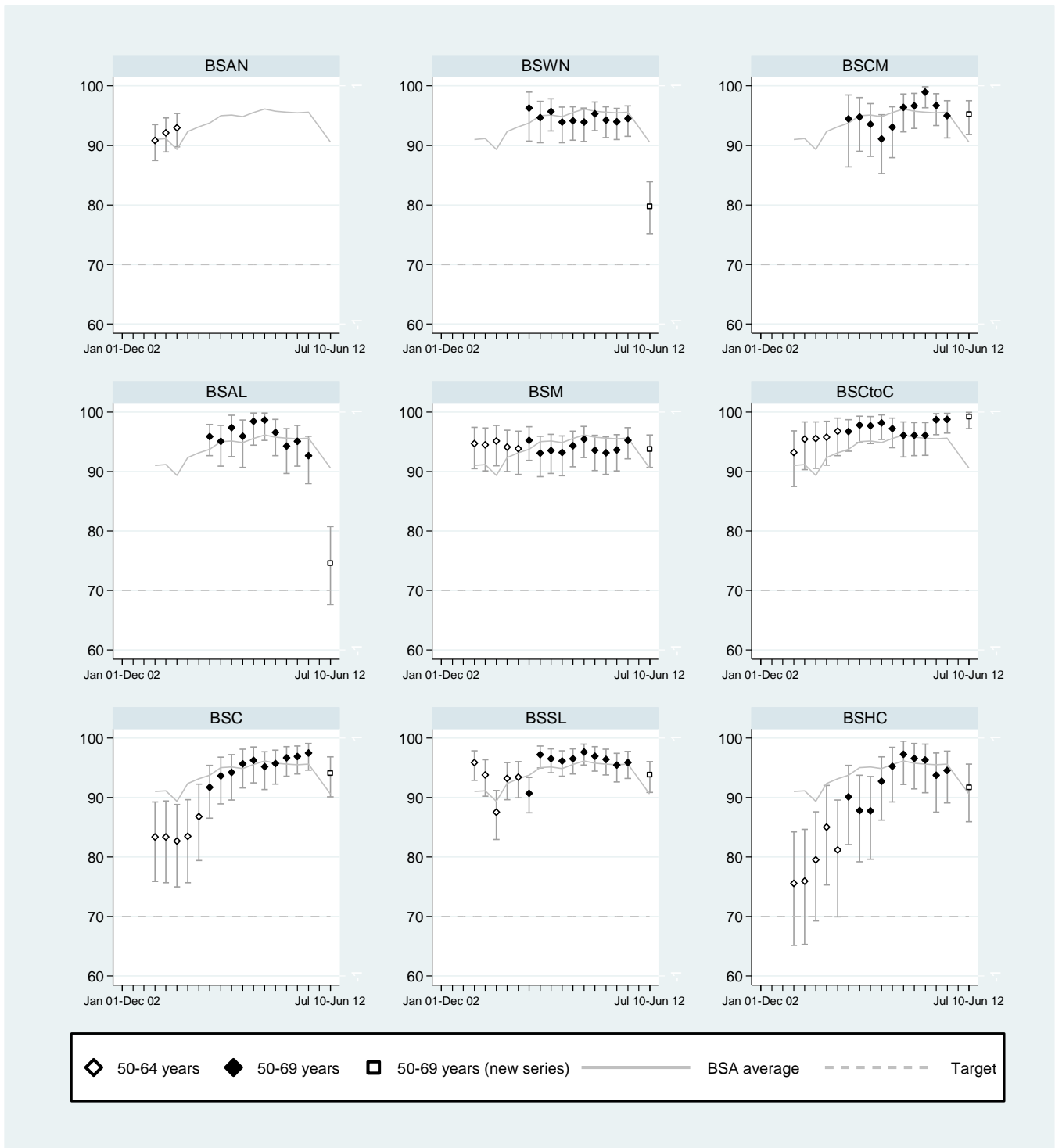
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

Figure 2h.a: Percentage of women with a preoperative diagnosis of cancer (DCIS and invasive), 6 months



Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

Figure 2h.b: Percentage of women with a preoperative diagnosis of cancer (DCIS and invasive), 2 years



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

2.1. Specificity

Description:

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

This is calculated as: number with true negative screening results as a percentage of this number plus the number with false positive screening results. (NB: interval cancers excluded)

Target:

> 93 %

2.1.1. Specificity, 6 months

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

	Initial			Subsequent		
	Negative screens (RRS from Screen)	Negative screen plus False Positives	% (95% CI)	Negative screens (RRS from Screen)	Negative screen plus False Positives	% (95% CI)
<i>45-49 years</i>						
BSWN	2,244	2,476	90.6 (89.4-91.7)	2,408	2,526	95.3 (94.4-96.1)
BSCM	1,584	1,734	91.3 (89.9-92.6)	1,730	1,806	95.8 (94.8-96.7)
BSAL	1,230	1,326	92.8 (91.2-94.1)	1,739	1,790	97.2 (96.3-97.9)
BSM	1,948	2,143	90.9 (89.6-92.1)	1,848	1,928	95.9 (94.9-96.7)
BSCtoC	1,455	1,534	94.9 (93.6-95.9)	1,839	1,877	98.0 (97.2-98.6)
BSC	1,290	1,400	92.1 (90.6-93.5)	1,548	1,604	96.5 (95.5-97.4)
BSSL	2,560	2,802	91.4 (90.3-92.4)	3,567	3,742	95.3 (94.6-96.0)
BSHC	516	562	91.8 (89.2-93.9)	688	722	95.3 (93.5-96.7)
BSA Total	12,827	13,977	91.8 (91.3-92.2)	15,367	15,995	96.1 (95.8-96.4)
<i>50-69 years</i>						
BSWN	1,114	1,252	89.0 (87.1-90.7)	12,642	13,002	97.2 (96.9-97.5)
BSCM	884	960	92.1 (90.2-93.7)	7,703	7,891	97.6 (97.3-97.9)
BSAL	808	856	94.4 (92.6-95.8)	6,917	7,078	97.7 (97.4-98.1)
BSM	1,107	1,218	90.9 (89.1-92.4)	12,191	12,515	97.4 (97.1-97.7)
BSCtoC	721	789	91.4 (89.2-93.2)	12,096	12,261	98.7 (98.4-98.9)
BSC	579	628	92.2 (89.8-94.2)	8,689	8,893	97.7 (97.4-98.0)
BSSL	563	611	92.1 (89.7-94.2)	19,567	20,133	97.2 (97.0-97.4)
BSHC	218	236	92.4 (88.2-95.4)	5,929	6,077	97.6 (97.1-97.9)
BSA Total	5,994	6,550	91.5 (90.8-92.2)	85,734	87,850	97.6 (97.5-97.7)

RRS:

Exact binomial 95% confidence intervals presented

2.1.2. 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 21.2: Estimated specificity of BSA by Lead Provider, 2years

	Initial			Subsequent		
	Negative screens (RRS from Screen)	Negative screen plus False Positives	% (95% CI)	Negative screens (RRS from Screen)	Negative screen plus False Positives	% (95% CI)
45-49 years						
BSWN	8,691	9,666	89.9 (89.3-90.5)	9,659	10,077	95.9 (95.4-96.2)
BSCM	6,389	7,006	91.2 (90.5-91.8)	5,587	5,809	96.2 (95.7-96.7)
BSAL	5,103	5,463	93.4 (92.7-94.1)	5,447	5,608	97.1 (96.7-97.6)
BSM	7,038	7,764	90.6 (90.0-91.3)	6,719	7,009	95.9 (95.4-96.3)
BSCtoC	5,705	6,047	94.3 (93.7-94.9)	7,284	7,424	98.1 (97.8-98.4)
BSC	5,206	5,613	92.7 (92.0-93.4)	5,892	6,108	96.5 (96.0-96.9)
BSSL	8,597	9,365	91.8 (91.2-92.3)	14,328	14,991	95.6 (95.2-95.9)
BSHC	2,736	3,002	91.1 (90.1-92.1)	3,837	3,981	96.4 (95.8-96.9)
BSA Total	49,465	53,926	91.7 (91.5-92.0)	58,753	61,007	96.3 (96.2-96.5)
50-69 years						
BSWN	4,852	5,469	88.7 (87.8-89.5)	48,826	50,101	97.5 (97.3-97.6)
BSCM	4,097	4,515	90.7 (89.9-91.6)	27,256	27,953	97.5 (97.3-97.7)
BSAL	3,624	3,836	94.5 (93.7-95.2)	23,733	24,254	97.9 (97.7-98.0)
BSM	4,411	4,824	91.4 (90.6-92.2)	45,128	46,336	97.4 (97.2-97.5)
BSCtoC	3,131	3,365	93.0 (92.1-93.9)	42,603	43,107	98.8 (98.7-98.9)
BSC	2,648	2,878	92.0 (91.0-93.0)	33,108	33,851	97.8 (97.6-98.0)
BSSL	2,016	2,157	93.5 (92.3-94.5)	67,499	69,362	97.3 (97.2-97.4)
BSHC	1,105	1,210	91.3 (89.6-92.8)	24,056	24,670	97.5 (97.3-97.7)
BSA Total	25,884	28,254	91.6 (91.3-91.9)	312,209	319,634	97.7 (97.6-97.7)

RRS:

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: ≤ 3.5 per 1000 women screened

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

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

	Initial			Subsequent		
	Benign open biopsies	Number of women screened	Rate per 1,000 (95%CI)	Benign open biopsies	Number of women screened	Rate per 1,000 (95%CI)
<i>45-49 years</i>						
BSWN	28	9,744	2.9 (1.9-4.2)	17	10,115	
BSCM	14	7,069	2.0 (1.1-3.3)	8	5,836	
BSAL	15	5,495	2.7 (1.5-4.5)	5	5,639	
BSM	21	7,817	2.7 (1.7-4.1)	2	7,035	
BSCtoC	9	6,077	1.5 (0.7-2.8)	1	7,452	
BSC	7	5,654	1.2 (0.5-2.6)	2	6,130	
BSSL	19	9,402	2.0 (1.2-3.2)	3	15,044	
BSHC	5	3,020	1.7 (0.5-3.9)	2	4,003	
BSA Total	118	54,278	2.2 (1.8-2.6)	40	61,254	
<i>50-69 years</i>						
BSWN	15	5,558	2.7 (1.5-4.5)	✓	ns	52 50,412 1.0 (0.8-1.4) ✓✓✓ *
BSCM	9	4,606	2.0 (0.9-3.7)	✓	ns	18 28,162 0.6 (0.4-1.0) ✓✓✓ *
BSAL	9	3,908	2.3 (1.1-4.4)	✓	ns	10 24,396 0.4 (0.2-0.8) ✓✓✓ *
BSM	13	4,882	2.7 (1.4-4.6)	✓	ns	32 46,631 0.7 (0.5-1.0) ✓✓✓ *
BSCtoC	9	3,409	2.6 (1.2-5.0)	✓	ns	6 43,344 0.1 (0.1-0.3) ✓✓✓ *
BSC	4	2,923	1.4 (0.4-3.5)	✓	ns	15 34,049 0.4 (0.2-0.7) ✓✓✓ *
BSSL	6	2,186	2.7 (1.0-6.0)	✓	ns	25 69,728 0.4 (0.2-0.5) ✓✓✓ *
BSHC	2	1,221	1.6 (0.2-5.9)	✓	ns	12 24,818 0.5 (0.2-0.8) ✓✓✓ *
BSA Total	67	28,693	2.3 (1.8-3.0)	✓✓✓	*	170 321,540 0.5 (0.5-0.6) ✓✓✓ *

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

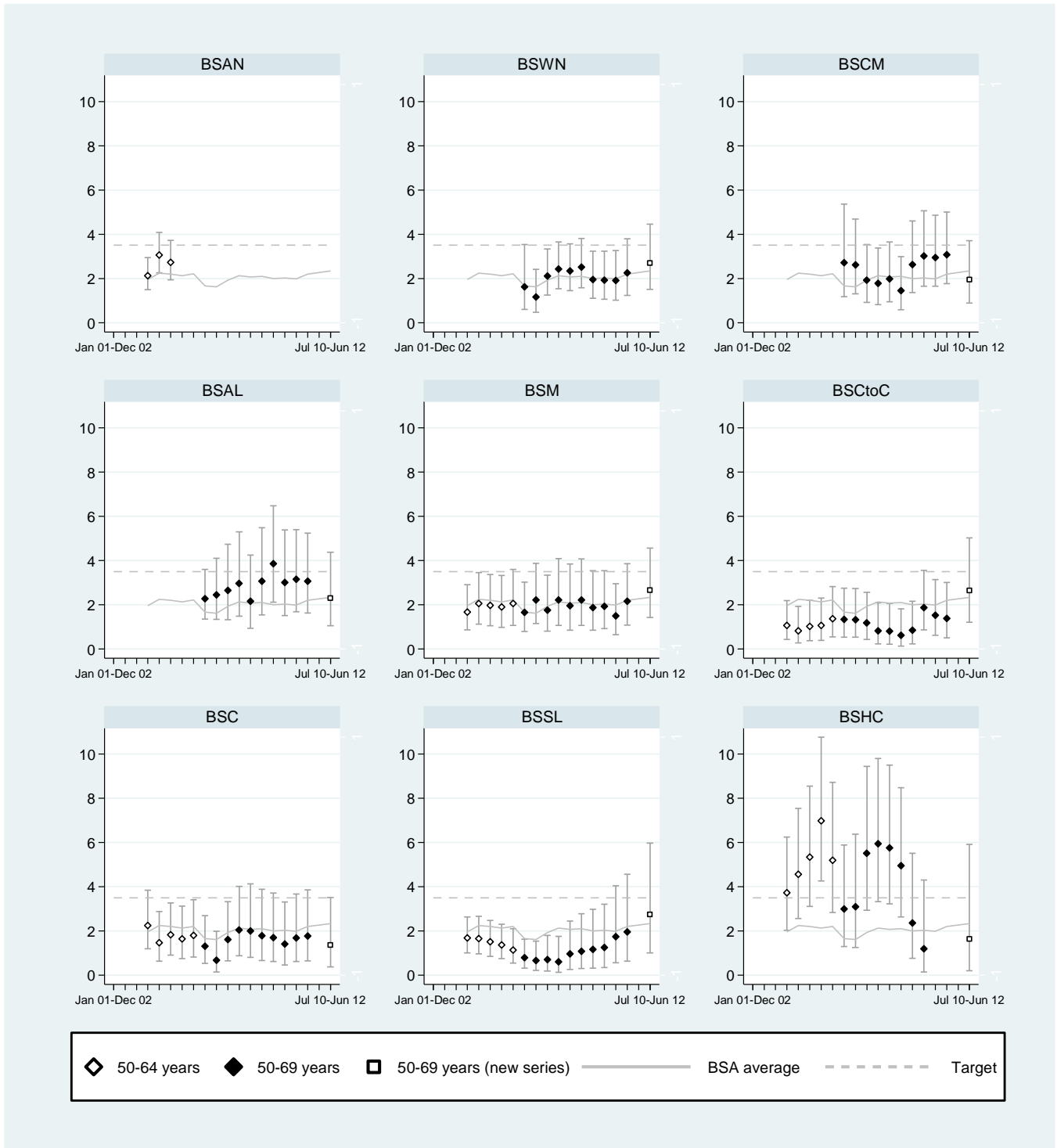
✓✓ Difference of ≥ 5 -9% magnitude better than target value and statistically significant

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

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

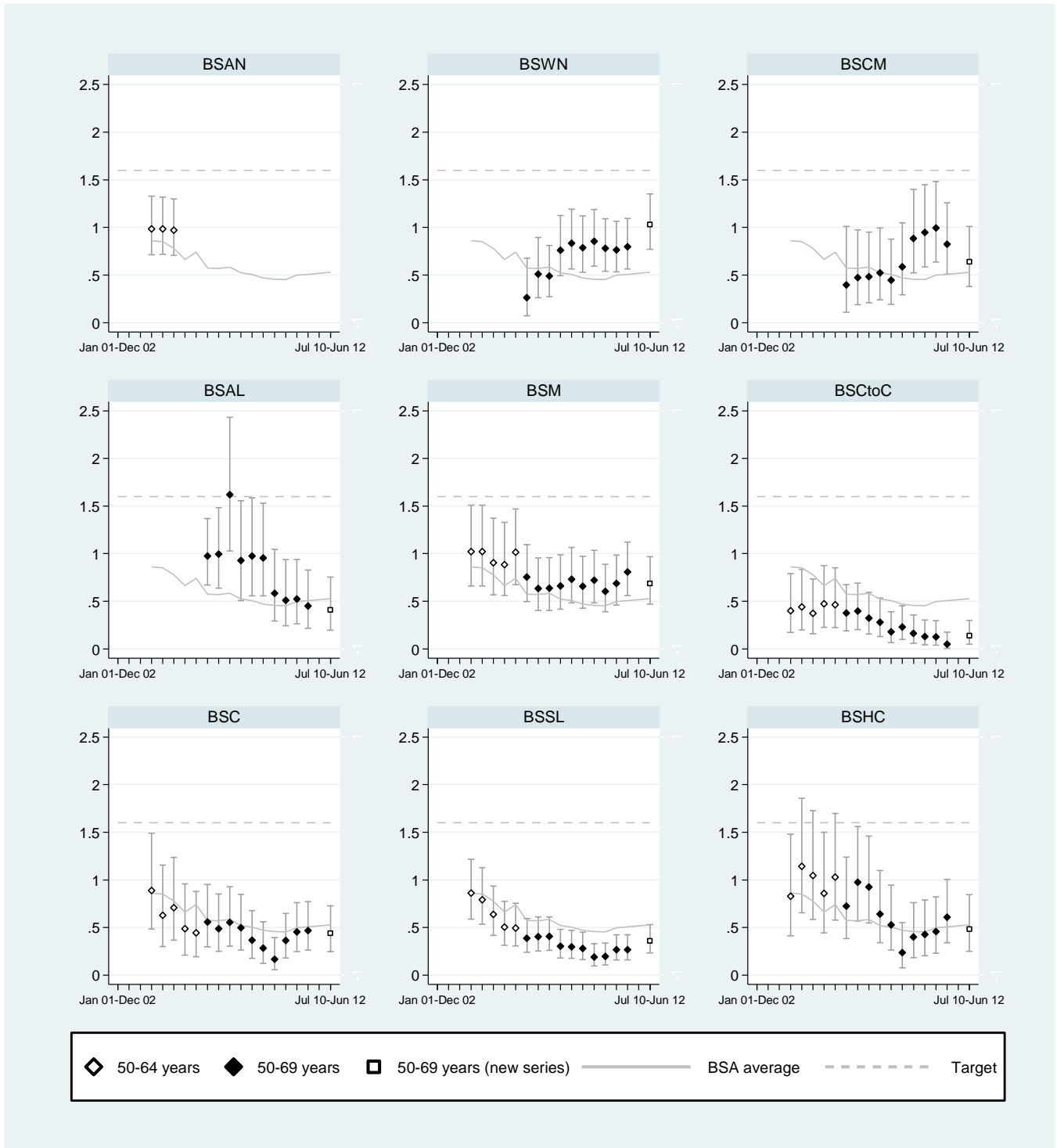
xxx Difference of ≥ 10 % magnitude worse than target value and statistically significant

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

3. EARLY DETECTION OF DCIS OR INVASIVE BREAST CANCER

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

Description:

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

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

The cancer detection targets now relate to invasive cancers only, however, total (DCIS and invasive) cancer detection rates will continue to be reported.

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

	Initial			Subsequent		
	Number	Women screened	Rate per 1000 (95%CI)	Number	Women screened	Rate per 1000 (95%CI)
<i>45-49 years</i>						
BSWN	20	2,504	8.0 (4.9-12.3)	9	2,538	3.5 (1.6-6.7)
BSCM	11	1,749	6.3 (3.1-11.3)	4	1,811	2.2 (0.6-5.7)
BSAL	4	1,333	3.0 (0.8-7.7)	8	1,798	4.4 (1.9-8.8)
BSM	18	2,164	8.3 (4.9-13.1)	4	1,933	2.1 (0.6-5.3)
BSCtoC	1	1,535	0.7 (0.0-3.6)	9	1,886	4.8 (2.2-9.1)
BSC	7	1,408	5.0 (2.0-10.2)	6	1,610	3.7 (1.4-8.1)
BSSL	10	2,815	3.6 (1.7-6.5)	21	3,763	5.6 (3.5-8.5)
BSHC	0	562	0.0 (0.0-6.6)	4	728	5.5 (1.5-14.1)
BSA Total	71	14,070	5.0 (3.9-6.4)	65	16,067	4.0 (3.1-5.2)
<i>50-69 years</i>						
BSWN	10	1,265	7.9 (3.8-14.5)	77	13,087	5.9 (4.6-7.4)
BSCM	10	977	10.2 (4.9-18.8)	55	7,950	6.9 (5.2-9.0)
BSAL	10	868	11.5 (5.5-21.2)	36	7,119	5.1 (3.5-7.0)
BSM	15	1,234	12.2 (6.8-20.0)	70	12,590	5.6 (4.3-7.0)
BSCtoC	8	800	10.0 (4.3-19.7)	64	12,330	5.2 (4.0-6.6)
BSC	6	634	9.5 (3.5-20.6)	49	8,947	5.5 (4.1-7.2)
BSSL	2	615	3.3 (0.4-11.7)	89	20,225	4.4 (3.5-5.4)
BSHC	2	238	8.4 (1.0-30.4)	27	6,109	4.4 (2.9-6.4)
BSA Total	63	6,631	9.5 (7.3-12.2)	467	88,357	5.3 (4.8-5.8)

Poisson 95% confidence intervals presented

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

Description:

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

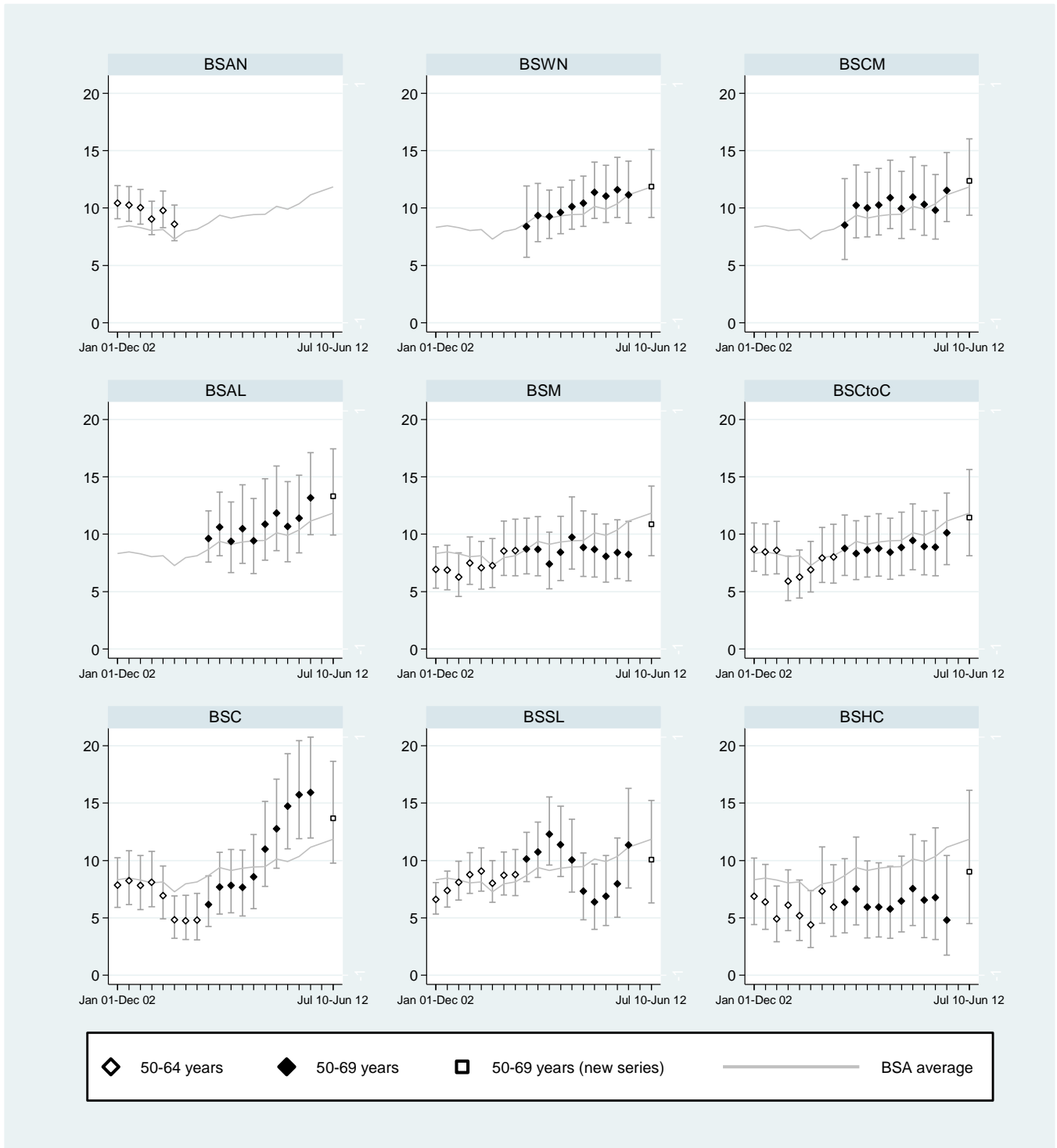
This is influenced by the background incidence of cancer in the population in the absence of screening. All other things being equal, the higher the cancer incidence, the higher the cancer detection rate will be.

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

	Initial			Subsequent		
	Number	Women screened	Rate per 1,000 (95%CI)	Number	Women screened	Rate per 1,000 (95%CI)
<i>45-49 years</i>						
BSWN	57	9,744	5.8 (4.4-7.6)	34	10,115	3.4 (2.3-4.7)
BSCM	39	7,069	5.5 (3.9-7.5)	20	5,836	3.4 (2.1-5.3)
BSAL	22	5,495	4.0 (2.5-6.1)	29	5,639	5.1 (3.4-7.4)
BSM	45	7,817	5.8 (4.2-7.7)	25	7,035	3.6 (2.3-5.2)
BSCtoC	25	6,077	4.1 (2.7-6.1)	25	7,452	3.4 (2.2-5.0)
BSC	36	5,654	6.4 (4.5-8.8)	22	6,130	3.6 (2.2-5.4)
BSSL	30	9,402	3.2 (2.2-4.6)	50	15,044	3.3 (2.5-4.4)
BSHC	13	3,020	4.3 (2.3-7.4)	19	4,003	4.7 (2.9-7.4)
BSA Total	267	54,278	4.9 (4.3-5.5)	224	61,254	3.7 (3.2-4.2)
<i>50-69 years</i>						
BSWN	66	5,558	11.9 (9.2-15.1)	280	50,412	5.6 (4.9-6.2)
BSCM	57	4,606	12.4 (9.4-16.0)	195	28,162	6.9 (6.0-8.0)
BSAL	52	3,908	13.3 (9.9-17.4)	129	24,396	5.3 (4.4-6.3)
BSM	53	4,882	10.9 (8.1-14.2)	285	46,631	6.1 (5.4-6.9)
BSCtoC	39	3,409	11.4 (8.1-15.6)	216	43,344	5.0 (4.3-5.7)
BSC	40	2,923	13.7 (9.8-18.6)	179	34,049	5.3 (4.5-6.1)
BSSL	22	2,186	10.1 (6.3-15.2)	350	69,728	5.0 (4.5-5.6)
BSHC	11	1,221	9.0 (4.5-16.1)	133	24,818	5.4 (4.5-6.4)
BSA Total	340	28,693	11.8 (10.6-13.2)	1,767	321,540	5.5 (5.2-5.8)

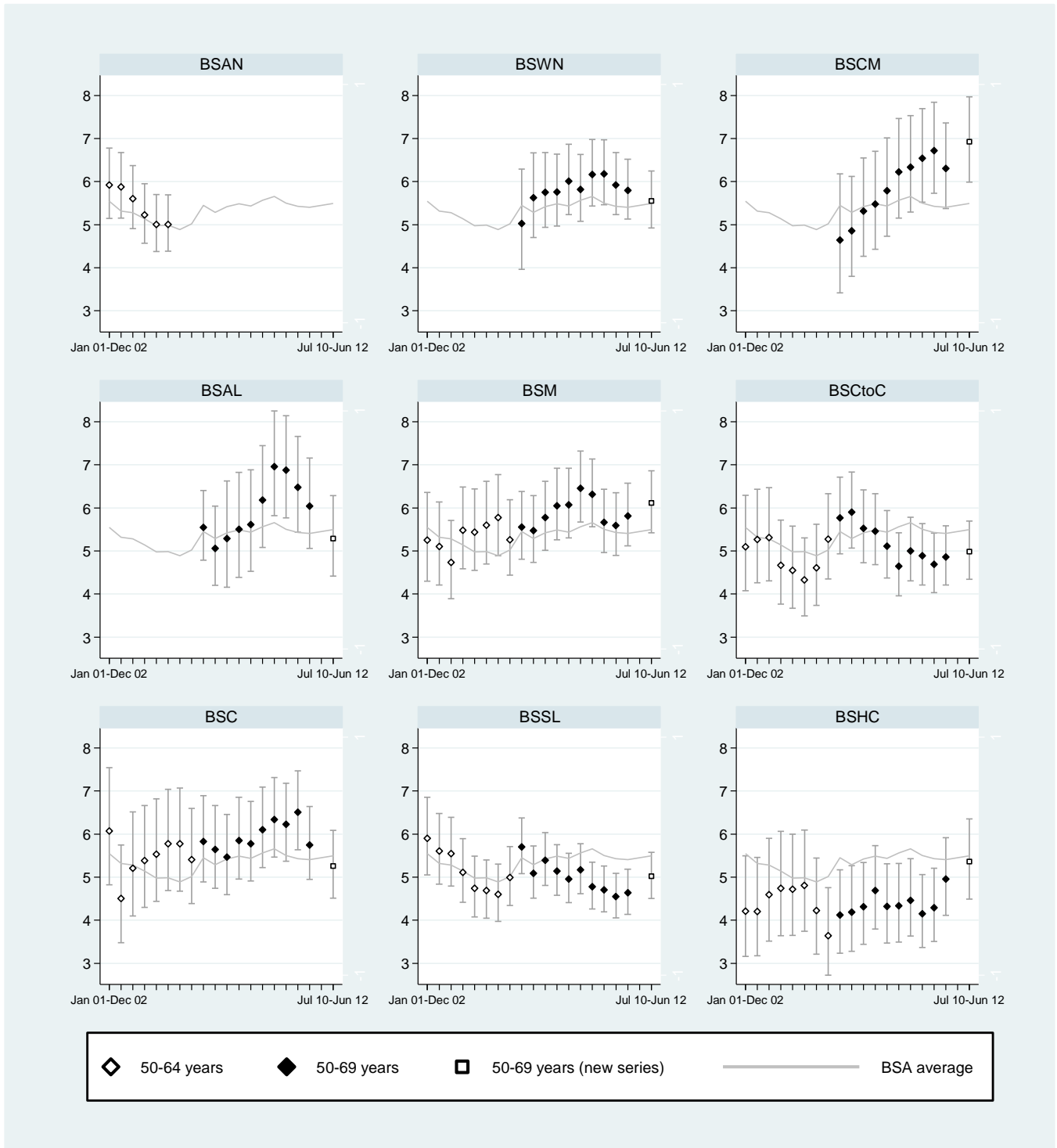
Poisson 95% confidence intervals presented

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols.

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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)
<i>45-49 years</i>						
BSWN	16	2,504	6.4 (3.7-10.4)	8	2,538	3.2 (1.4-6.2)
BSCM*	11	1,749	6.3 (3.1-11.3)	3	1,811	1.7 (0.3-4.8)
BSAL*	3	1,333	2.3 (0.5-6.6)	6	1,798	3.3 (1.2-7.3)
BSM*	13	2,164	6.0 (3.2-10.3)	4	1,933	2.1 (0.6-5.3)
BSCtoC	1	1,535	0.7 (0.0-3.6)	6	1,886	3.2 (1.2-6.9)
BSC	3	1,408	2.1 (0.4-6.2)	5	1,610	3.1 (1.0-7.2)
BSSL	6	2,815	2.1 (0.8-4.6)	16	3,763	4.3 (2.4-6.9)
BSHC	0	562	0.0 (0.0-6.6)	4	728	5.5 (1.5-14.1)
BSA Total	53	14,070	3.8 (2.8-4.9)	52	16,067	3.2 (2.4-4.2)
<i>50-69 years</i>						
BSWN	8	1,265	6.3 (2.7-12.5)	54	13,087	4.1 (3.1-5.4)
BSCM	8	977	8.2 (3.5-16.1)	43	7,950	5.4 (3.9-7.3)
BSAL	9	868	10.4 (4.7-19.7)	27	7,119	3.8 (2.5-5.5)
BSM	13	1,234	10.5 (5.6-18.0)	55	12,590	4.4 (3.3-5.7)
BSCtoC	7	800	8.8 (3.5-18.0)	55	12,330	4.5 (3.4-5.8)
BSC	5	634	7.9 (2.6-18.4)	40	8,947	4.5 (3.2-6.1)
BSSL	2	615	3.3 (0.4-11.7)	71	20,225	3.5 (2.7-4.4)
BSHC	1	238	4.2 (0.1-23.4)	18	6,109	2.9 (1.7-4.7)
BSA Total	53	6,631	8.0 (6.0-10.5)	363	88,357	4.1 (3.7-4.6)

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)
<i>45-49 years</i>						
BSWN	37	9,744	3.8 (2.7-5.2)	27	10,115	2.7 (1.8-3.9)
BSCM	31	7,069	4.4 (3.0-6.2)	12	5,836	2.1 (1.1-3.6)
BSAL	16	5,495	2.9 (1.7-4.7)	24	5,639	4.3 (2.7-6.3)
BSM	30	7,817	3.8 (2.6-5.5)	22	7,035	3.1 (2.0-4.7)
BSCtoC	18	6,077	3.0 (1.8-4.7)	15	7,452	2.0 (1.1-3.3)
BSC	27	5,654	4.8 (3.1-6.9)	15	6,130	2.4 (1.4-4.0)
BSSL	21	9,402	2.2 (1.4-3.4)	39	15,044	2.6 (1.8-3.5)
BSHC	8	3,020	2.6 (1.1-5.2)	16	4,003	4.0 (2.3-6.5)
BSA Total	188	54,278	3.5 (3.0-4.0)	170	61,254	2.8 (2.4-3.2)
<i>50-69 years</i>						
BSWN	52	5,558	9.4 (7.0-12.3) ✓✓✓ *	217	50,412	4.3 (3.8-4.9) ✓✓✓ *
BSCM	44	4,606	9.6 (6.9-12.8) ✓✓✓ *	144	28,162	5.1 (4.3-6.0) ✓✓✓ *
BSAL	39	3,908	10.0 (7.1-13.6) ✓✓✓ *	91	24,396	3.7 (3.0-4.6) ✓ ns
BSM	42	4,882	8.6 (6.2-11.6) ✓✓✓ *	229	46,631	4.9 (4.3-5.6) ✓✓✓ *
BSCtoC	31	3,409	9.1 (6.2-12.9) ✓✓✓ *	177	43,344	4.1 (3.5-4.7) ✓✓✓ *
BSC	33	2,923	11.3 (7.8-15.9) ✓✓✓ *	139	34,049	4.1 (3.4-4.8) ✓ ns
BSSL	17	2,186	7.8 (4.5-12.5) ✓ ns	285	69,728	4.1 (3.6-4.6) ✓✓✓ *
BSHC	9	1,221	7.4 (3.4-14.0) ✓ ns	103	24,818	4.2 (3.4-5.0) ✓ ns
BSA Total	267	28,693	9.3 (8.2-10.5) ✓✓✓ *	1,385	321,540	4.3 (4.1-4.5) ✓✓✓ *

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				
<i>Initial round</i>				
BSWN	11.9 (10.1-14.0)	89.0 (87.1-90.7)	6.6 (3.2-11.8)	7.9 (3.8-14.5)
BSCM	9.5 (7.7-11.7)	92.1 (90.2-93.7)	10.8 (5.3-18.9)	10.2 (4.9-18.8)
BSAL	6.9 (5.3-8.9)	94.4 (92.6-95.8)	16.7 (8.3-28.5)	11.5 (5.5-21.2)
BSM	10.3 (8.6-12.2)	90.9 (89.1-92.4)	11.8 (6.8-18.7)	12.2 (6.8-20.0)
BSCtoC	9.9 (7.8-12.3)	91.4 (89.2-93.2)	16.3 (8.9-26.2)	10.0 (4.3-19.7)
BSC	8.7 (6.5-11.3)	92.2 (89.8-94.2)	10.9 (4.1-22.2)	9.5 (3.5-20.6)
BSSL	8.5 (6.3-11.1)	92.1 (89.7-94.2)	3.8 (0.5-13.2)	3.3 (0.4-11.7)
BSHC	8.4 (5.1-13.0)	92.4 (88.2-95.4)	10.0 (1.2-31.7)	8.4 (1.0-30.4)
BSA Total	9.6 (8.9-10.4)	91.5 (90.8-92.2)	9.9 (7.7-12.5)	9.5 (7.3-12.2)
<i>Subsequent round</i>				
BSWN	3.4 (3.1-3.7)	97.2 (96.9-97.5)	17.3 (13.9-21.1)	5.9 (4.6-7.4)
BSCM	3.1 (2.7-3.5)	97.6 (97.3-97.9)	22.3 (17.2-28.0)	6.9 (5.2-9.0)
BSAL	2.8 (2.5-3.3)	97.7 (97.4-98.1)	17.8 (12.8-23.8)	5.1 (3.5-7.0)
BSM	3.2 (2.9-3.5)	97.4 (97.1-97.7)	17.5 (13.9-21.6)	5.6 (4.3-7.0)
BSCtoC	1.9 (1.7-2.2)	98.7 (98.4-98.9)	27.4 (21.7-33.5)	5.2 (4.0-6.6)
BSC	2.9 (2.5-3.3)	97.7 (97.4-98.0)	19.0 (14.4-24.3)	5.5 (4.1-7.2)
BSSL	3.3 (3.0-3.5)	97.2 (97.0-97.4)	13.5 (11.0-16.4)	4.4 (3.5-5.4)
BSHC	2.9 (2.5-3.4)	97.6 (97.1-97.9)	15.0 (10.1-21.1)	4.4 (2.9-6.4)
BSA Total	3.0 (2.9-3.1)	97.6 (97.5-97.7)	17.8 (16.4-19.3)	5.3 (4.8-5.8)
2 years				
<i>Initial round</i>				
BSWN	12.7 (11.8-13.7)	88.7 (87.8-89.5)	9.3 (7.3-11.7)	11.9 (9.2-15.1)
BSCM	11.0 (10.1-12.0)	90.7 (89.9-91.6)	11.2 (8.6-14.3)	12.4 (9.4-16.0)
BSAL	7.3 (6.4-8.2)	94.5 (93.7-95.2)	18.3 (14.0-23.3)	13.3 (9.9-17.4)
BSM	9.6 (8.8-10.6)	91.4 (90.6-92.2)	11.3 (8.5-14.5)	10.9 (8.1-14.2)
BSCtoC	8.2 (7.2-9.2)	93.0 (92.1-93.9)	14.0 (10.2-18.7)	11.4 (8.1-15.6)
BSC	9.4 (8.3-10.6)	92.0 (91.0-93.0)	14.5 (10.6-19.3)	13.7 (9.8-18.6)
BSSL	7.8 (6.7-9.0)	93.5 (92.3-94.5)	12.9 (8.3-18.9)	10.1 (6.3-15.2)
BSHC	9.5 (7.9-11.4)	91.3 (89.6-92.8)	9.5 (4.8-16.3)	9.0 (4.5-16.1)
BSA Total	9.8 (9.4-10.2)	91.6 (91.3-91.9)	12.1 (10.9-13.4)	11.8 (10.6-13.2)
<i>Subsequent round</i>				
BSWN	3.1 (3.0-3.3)	97.5 (97.3-97.6)	17.7 (15.8-19.6)	5.6 (4.9-6.2)
BSCM	3.2 (3.0-3.4)	97.5 (97.3-97.7)	21.5 (18.9-24.4)	6.9 (6.0-8.0)
BSAL	2.7 (2.5-2.9)	97.9 (97.7-98.0)	19.5 (16.5-22.7)	5.3 (4.4-6.3)
BSM	3.2 (3.1-3.4)	97.4 (97.2-97.5)	19.0 (17.0-21.0)	6.1 (5.4-6.9)
BSCtoC	1.7 (1.6-1.8)	98.8 (98.7-98.9)	29.1 (25.9-32.6)	5.0 (4.3-5.7)
BSC	2.8 (2.6-2.9)	97.8 (97.6-98.0)	19.0 (16.6-21.7)	5.3 (4.5-6.1)
BSSL	3.2 (3.1-3.3)	97.3 (97.2-97.4)	15.7 (14.2-17.3)	5.0 (4.5-5.6)
BSHC	3.1 (2.9-3.3)	97.5 (97.3-97.7)	17.5 (14.8-20.3)	5.4 (4.5-6.4)
BSA Total	2.9 (2.8-3.0)	97.7 (97.6-97.7)	18.9 (18.1-19.7)	5.5 (5.2-5.8)

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)				
<i>45-49 years</i>										
BSWN	14	33	42.4 (25.5-60.8)	13	27	48.1 (28.7-68.1)				
BSCM	5	28	17.9 (6.1-36.9)	6	12	50.0 (21.1-78.9)				
BSAL	5	13	38.5 (13.9-68.4)	8	23	34.8 (16.4-57.3)				
BSM	10	28	35.7 (18.6-55.9)	9	22	40.9 (20.7-63.6)				
BSCtoC	3	18	16.7 (3.6-41.4)	3	15	20.0 (4.3-48.1)				
BSC	9	27	33.3 (16.5-54.0)	3	15	20.0 (4.3-48.1)				
BSSL	7	21	33.3 (14.6-57.0)	16	38	42.1 (26.3-59.2)				
BSHC	3	8	37.5 (8.5-75.5)	4	15	26.7 (7.8-55.1)				
BSA Total	56	176	31.8 (25.0-39.2)	62	167	37.1 (29.8-44.9)				
<i>50-69 years</i>										
BSWN	28	49	57.1 (42.2-71.2)	✓✓✓	*	76	213	35.7 (29.3-42.5)	✓	ns
BSCM	12	43	27.9 (15.3-43.7)	✓	ns	47	143	32.9 (25.2-41.2)	✓	ns
BSAL	12	31	38.7 (21.8-57.8)	✓	ns	35	86	40.7 (30.2-51.8)	✓✓✓	*
BSM	13	40	32.5 (18.6-49.1)	✓	ns	84	226	37.2 (30.9-43.8)	✓✓✓	*
BSCtoC	6	31	19.4 (7.5-37.5)	✓	ns	60	175	34.3 (27.3-41.8)	✓	ns
BSC	4	31	12.9 (3.6-29.8)	✓	ns	55	136	40.4 (32.1-49.2)	✓✓✓	*
BSSL	4	17	23.5 (6.8-49.9)	✓	ns	118	284	41.5 (35.8-47.5)	✓✓✓	*
BSHC	3	9	33.3 (7.5-70.1)	✓	ns	37	99	37.4 (27.9-47.7)	✓	ns
BSA Total	82	251	32.7 (26.9-38.9)	✓✓✓	*	512	1362	37.6 (35.0-40.2)	✓✓✓	*

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 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)				
<i>45-49 years</i>										
BSWN	14	9,744	14.4 (7.9-24.1)	13	10,115	12.9 (6.8-22.0)				
BSCM	5	7,069	7.1 (2.3-16.5)	6	5,836	10.3 (3.8-22.4)				
BSAL	5	5,495	9.1 (3.0-21.2)	8	5,639	14.2 (6.1-28.0)				
BSM	10	7,817	12.8 (6.1-23.5)	9	7,035	12.8 (5.8-24.3)				
BSCtoC	3	6,077	4.9 (1.0-14.4)	3	7,452	4.0 (0.8-11.8)				
BSC	9	5,654	15.9 (7.3-30.2)	3	6,130	4.9 (1.0-14.3)				
BSSL	7	9,402	7.4 (3.0-15.3)	16	15,044	10.6 (6.1-17.3)				
BSHC	3	3,020	9.9 (2.0-29.0)	4	4,003	10.0 (2.7-25.6)				
BSA Total	56	54,278	10.3 (7.8-13.4)	62	61,254	10.1 (7.8-13.0)				
<i>50-69 years</i>										
BSWN	28	5,558	50.4 (33.5-72.8)	✓✓✓	*	76	50,412	15.1 (11.9-18.9)	✓✓✓	*
BSCM	12	4,606	26.1 (13.5-45.5)	✓	ns	47	28,162	16.7 (12.3-22.2)	✓✓✓	*
BSAL	12	3,908	30.7 (15.9-53.6)	✓✓✓	*	35	24,396	14.3 (10.0-20.0)	✓	ns
BSM	13	4,882	26.6 (14.2-45.5)	✓	ns	84	46,631	18.0 (14.4-22.3)	✓✓✓	*
BSCtoC	6	3,409	17.6 (6.5-38.3)	✓	ns	60	43,344	13.8 (10.6-17.8)	✓✓✓	*
BSC	4	2,923	13.7 (3.7-35.0)	✓	ns	55	34,049	16.2 (12.2-21.0)	✓✓✓	*
BSSL	4	2,186	18.3 (5.0-46.9)	✓	ns	118	69,728	16.9 (14.0-20.3)	✓✓✓	*
BSHC	3	1,221	24.6 (5.1-71.8)	✓	ns	37	24,818	14.9 (10.5-20.5)	✓✓✓	*
BSA Total	82	28,693	28.6 (22.7-35.5)	✓✓✓	*	512	321,540	15.9 (14.6-17.4)	✓✓✓	*

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)
<i>45-49 years</i>						
BSWN	23	33	69.7 (51.3-84.4)	18	27	66.7 (46.0-83.5)
BSCM	9	28	32.1 (15.9-52.4)	7	12	58.3 (27.7-84.8)
BSAL	5	13	38.5 (13.9-68.4)	10	23	43.5 (23.2-65.5)
BSM	14	28	50.0 (30.6-69.4)	12	22	54.5 (32.2-75.6)
BSCtoC	4	18	22.2 (6.4-47.6)	4	15	26.7 (7.8-55.1)
BSC	15	27	55.6 (35.3-74.5)	8	15	53.3 (26.6-78.7)
BSSL	9	21	42.9 (21.8-66.0)	21	38	55.3 (38.3-71.4)
BSHC	7	8	87.5 (47.3-99.7)	7	15	46.7 (21.3-73.4)
BSA Total	86	176	48.9 (41.3-56.5)	87	167	52.1 (44.2-59.9)
<i>50-69 years</i>						
BSWN	32	49	65.3 (50.4-78.3) ✓✓✓ *	134	213	62.9 (56.0-69.4) ✓✓✓ *
BSCM	22	43	51.2 (35.5-66.7) ✓ ns	70	143	49.0 (40.5-57.4) ✓ ns
BSAL	19	31	61.3 (42.2-78.2) ✓ ns	43	86	50.0 (39.0-61.0) ✓ ns
BSM	22	40	55.0 (38.5-70.7) ✓ ns	140	226	61.9 (55.3-68.3) ✓✓✓ *
BSCtoC	10	31	32.3 (16.7-51.4) ✓ ns	89	175	50.9 (43.2-58.5) ✓ ns
BSC	13	31	41.9 (24.5-60.9) ✓ ns	84	136	61.8 (53.0-70.0) ✓✓✓ *
BSSL	8	17	47.1 (23.0-72.2) ✓ ns	193	284	68.0 (62.2-73.3) ✓✓✓ *
BSHC	3	9	33.3 (7.5-70.1) ✓ ns	60	99	60.6 (50.3-70.3) ✓✓✓ *
BSA Total	129	251	51.4 (45.0-57.7) ✓ ns	813	1362	59.7 (57.0-62.3) ✓✓✓ *

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	23	9,744	23.6 (15.0-35.4)	18	10,115	17.8 (10.5-28.1)				
BSCM	9	7,069	12.7 (5.8-24.2)	7	5,836	12.0 (4.8-24.7)				
BSAL	5	5,495	9.1 (3.0-21.2)	10	5,639	17.7 (8.5-32.6)				
BSM	14	7,817	17.9 (9.8-30.0)	12	7,035	17.1 (8.8-29.8)				
BSCtoC	4	6,077	6.6 (1.8-16.9)	4	7,452	5.4 (1.5-13.7)				
BSC	15	5,654	26.5 (14.8-43.8)	8	6,130	13.1 (5.6-25.7)				
BSSL	9	9,402	9.6 (4.4-18.2)	21	15,044	14.0 (8.6-21.3)				
BSHC	7	3,020	23.2 (9.3-47.8)	7	4,003	17.5 (7.0-36.0)				
BSA Total	86	54,278	15.8 (12.7-19.6)	87	61,254	14.2 (11.4-17.5)				
50-69 years										
BSWN	32	5,558	57.6 (39.4-81.3)	✓✓✓	*	134	50,412	26.6 (22.3-31.5)	✓✓✓	*
BSCM	22	4,606	47.8 (29.9-72.3)	✓	ns	70	28,162	24.9 (19.4-31.4)	✓✓✓	*
BSAL	19	3,908	48.6 (29.3-75.9)	✓	ns	43	24,396	17.6 (12.8-23.7)	✓	ns
BSM	22	4,882	45.1 (28.2-68.2)	✓	ns	140	46,631	30.0 (25.3-35.4)	✓✓✓	*
BSCtoC	10	3,409	29.3 (14.1-53.9)	✓	ns	89	43,344	20.5 (16.5-25.3)	✓	ns
BSC	13	2,923	44.5 (23.7-76.1)	✓	ns	84	34,049	24.7 (19.7-30.5)	✓✓✓	*
BSSL	8	2,186	36.6 (15.8-72.1)	✓	ns	193	69,728	27.7 (23.9-31.9)	✓✓✓	*
BSHC	3	1,221	24.6 (5.1-71.8)	✓	ns	60	24,818	24.2 (18.4-31.1)	✓✓✓	*
BSA Total	129	28,693	45.0 (37.5-53.4)	✓✓✓	*	813	321,540	25.3 (23.6-27.1)	✓✓✓	*

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 target

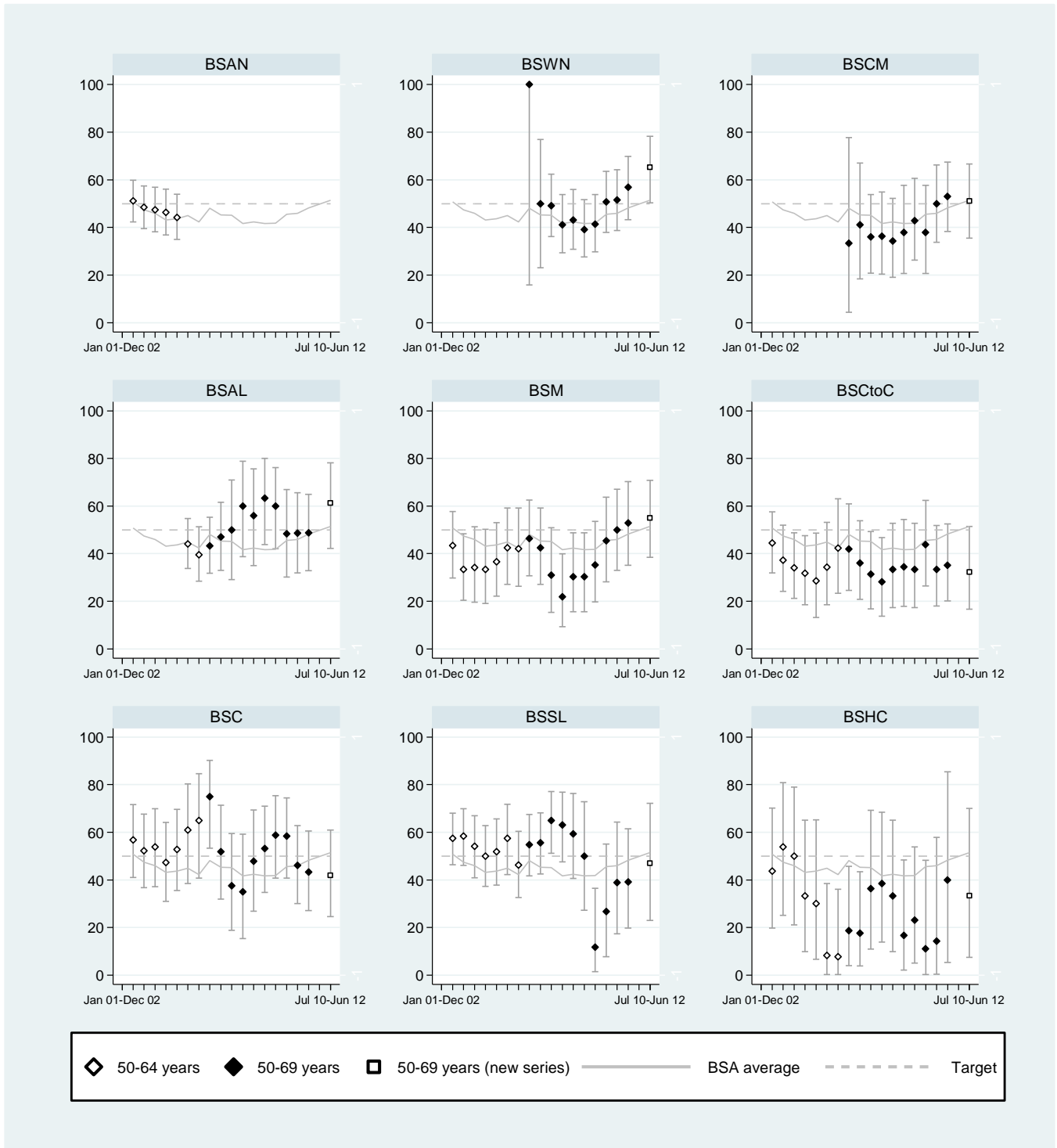
✓✓ Difference of ≥ 5-9% magnitude better than target value and statistically significant

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

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

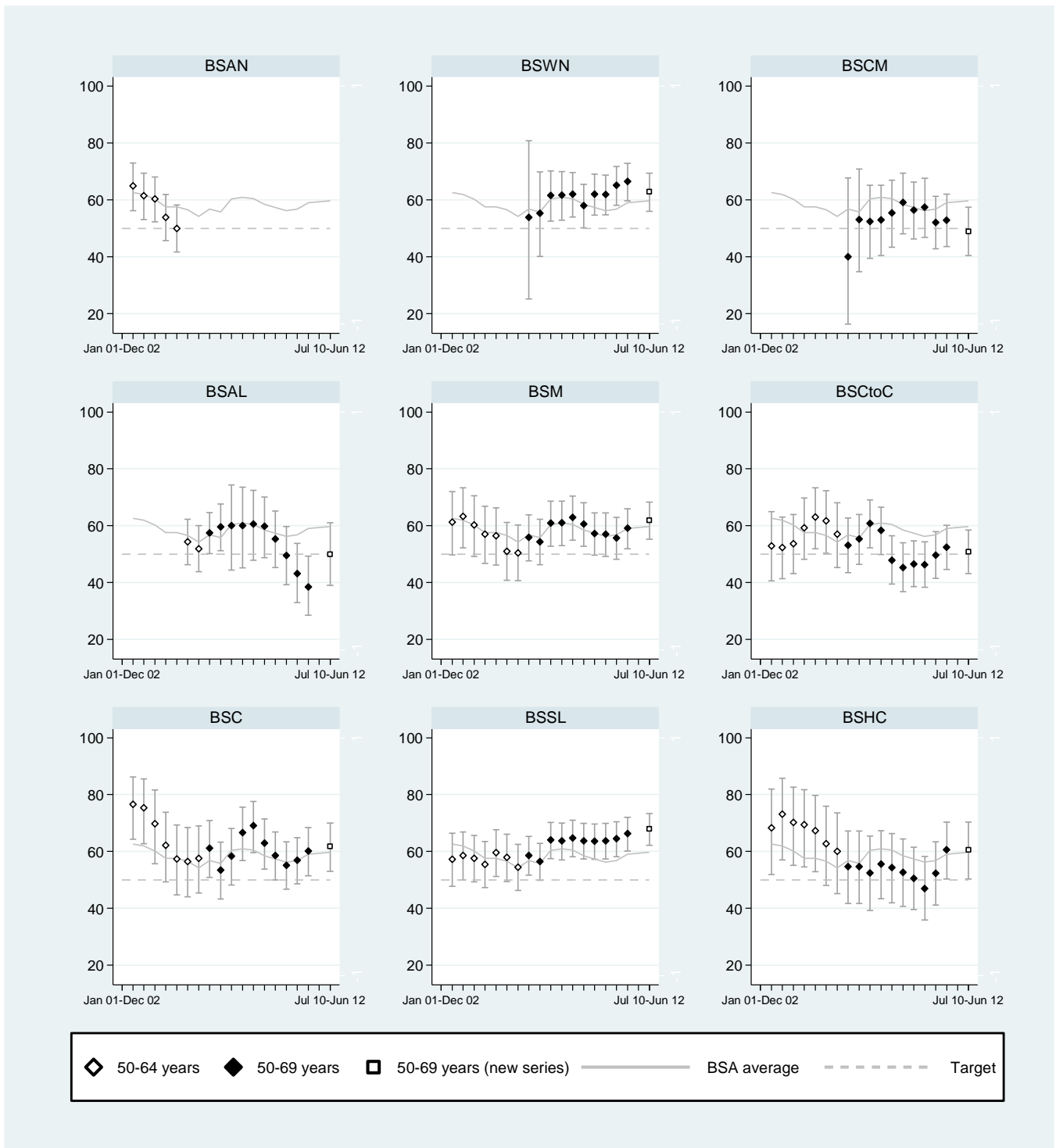
xxx Difference of ≥ 10% magnitude worse than target value and statistically significant

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



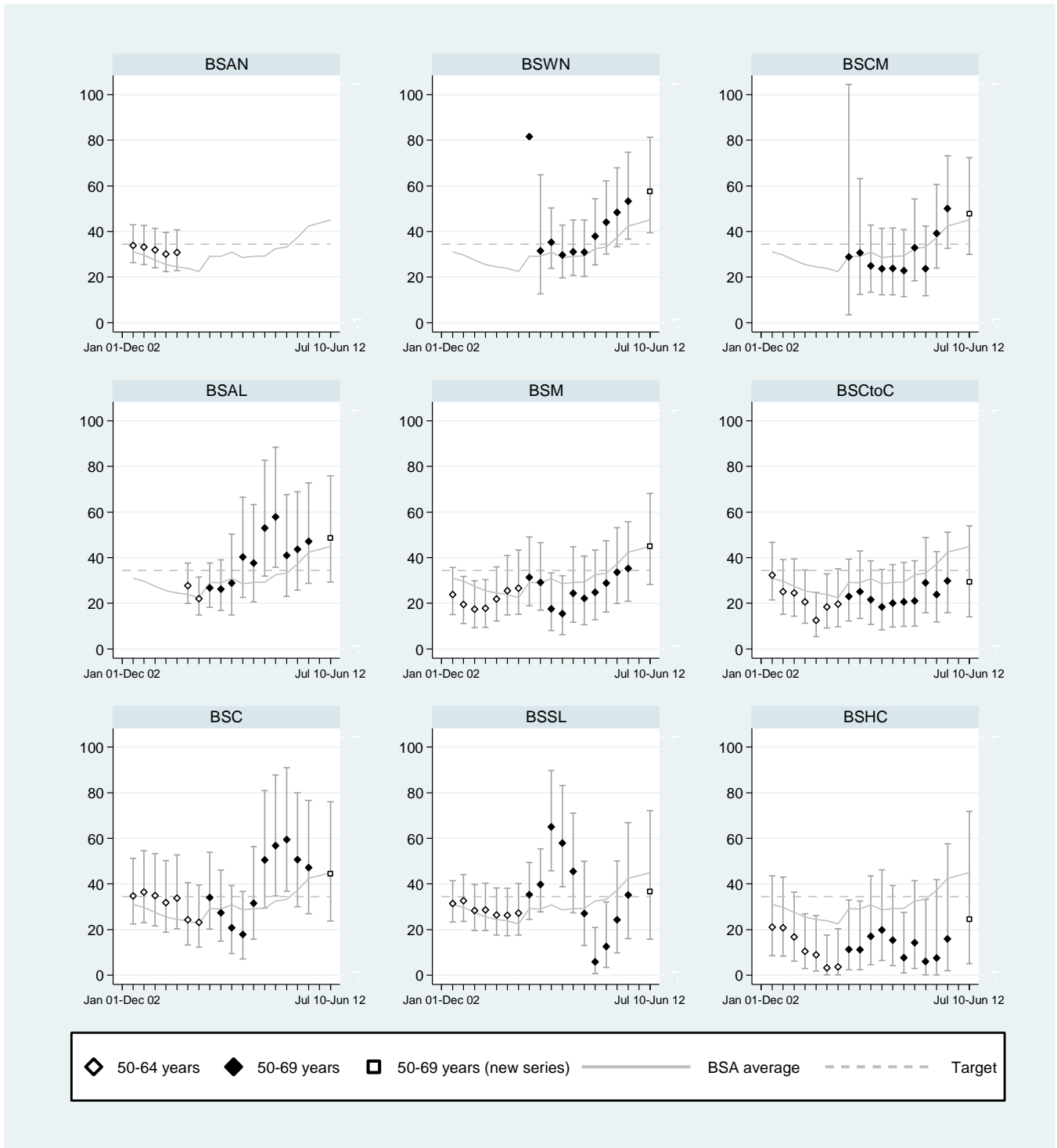
Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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



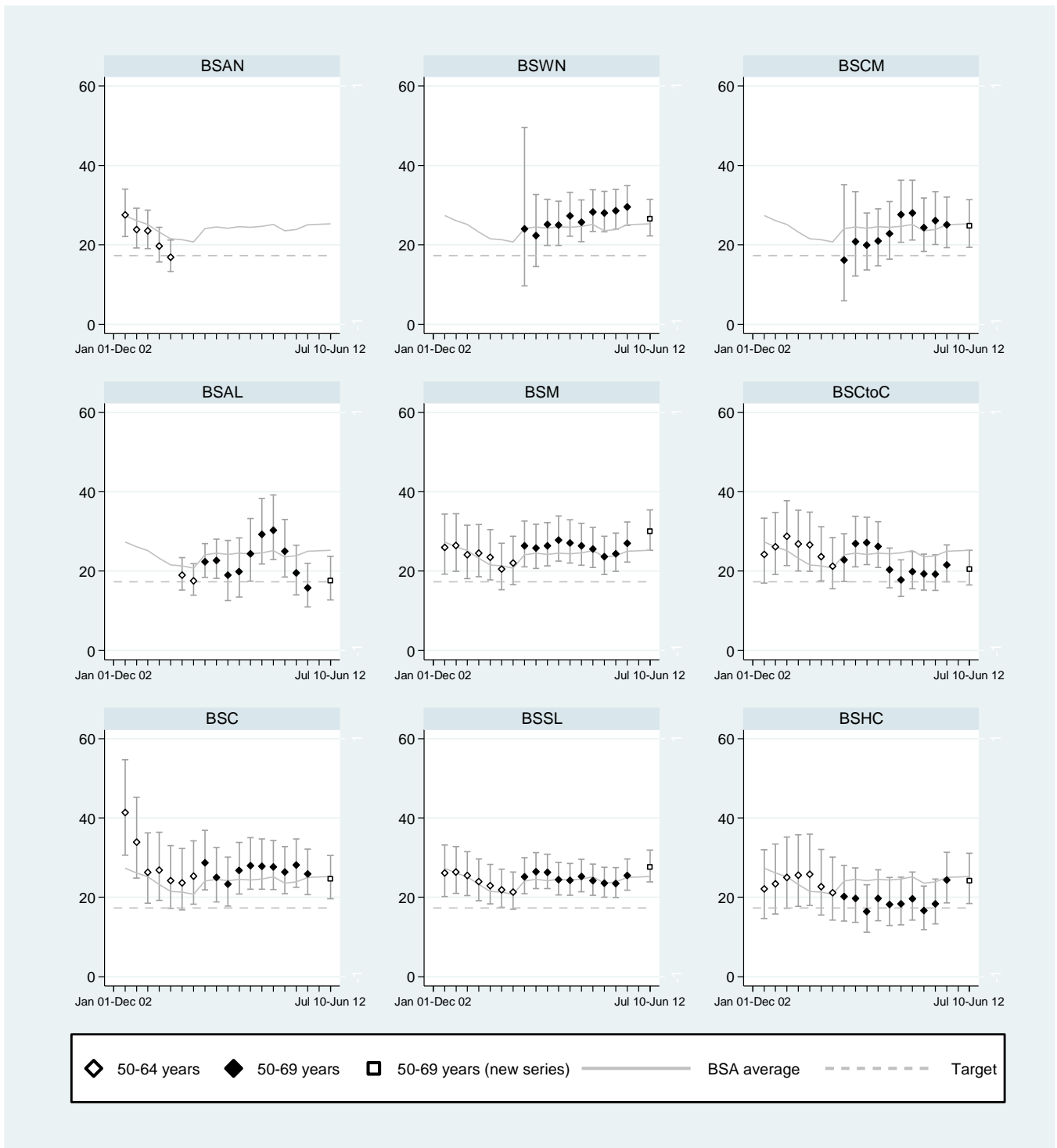
Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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 Jan 05-Dec 06 for BSWN was 81.6 (95% CI 9.9- 294.9). Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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)				
<i>45-49 years</i>										
BSWN	28	33	84.8 (68.1-94.9)	16	27	59.3 (38.8-77.6)				
BSCM	16	28	57.1 (37.2-75.5)	9	12	75.0 (42.8-94.5)				
BSAL	7	13	53.8 (25.1-80.8)	18	23	78.3 (56.3-92.5)				
BSM	22	28	78.6 (59.0-91.7)	13	22	59.1 (36.4-79.3)				
BSCtoC	12	18	66.7 (41.0-86.7)	10	15	66.7 (38.4-88.2)				
BSC	17	27	63.0 (42.4-80.6)	8	15	53.3 (26.6-78.7)				
BSSL	16	21	76.2 (52.8-91.8)	30	38	78.9 (62.7-90.4)				
BSHC	6	8	75.0 (34.9-96.8)	10	15	66.7 (38.4-88.2)				
BSA Total	124	176	70.5 (63.1-77.1)	114	167	68.3 (60.6-75.2)				
<i>50-69 years</i>										
BSWN	39	49	79.6 (65.7-89.8)	✓	ns	162	213	76.1 (69.7-81.6)	✓	ns
BSCM	32	43	74.4 (58.8-86.5)	✓	ns	106	143	74.1 (66.1-81.1)	✓	ns
BSAL	25	31	80.6 (62.5-92.5)	✓	ns	67	86	77.9 (67.7-86.1)	✓	ns
BSM	31	40	77.5 (61.5-89.2)	✓	ns	175	226	77.4 (71.4-82.7)	✓	ns
BSCtoC	20	31	64.5 (45.4-80.8)	✓	ns	139	175	79.4 (72.7-85.2)	✓	ns
BSC	18	31	58.1 (39.1-75.5)	✓	ns	103	136	75.7 (67.6-82.7)	✓	ns
BSSL	13	17	76.5 (50.1-93.2)	✓	ns	230	284	81.0 (75.9-85.4)	✓✓	*
BSHC	8	9	88.9 (51.8-99.7)	✓	ns	78	99	78.8 (69.4-86.4)	✓	ns
BSA Total	186	251	74.1 (68.2-79.4)	✓	ns	1060	1362	77.8 (75.5-80.0)	✓	*

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

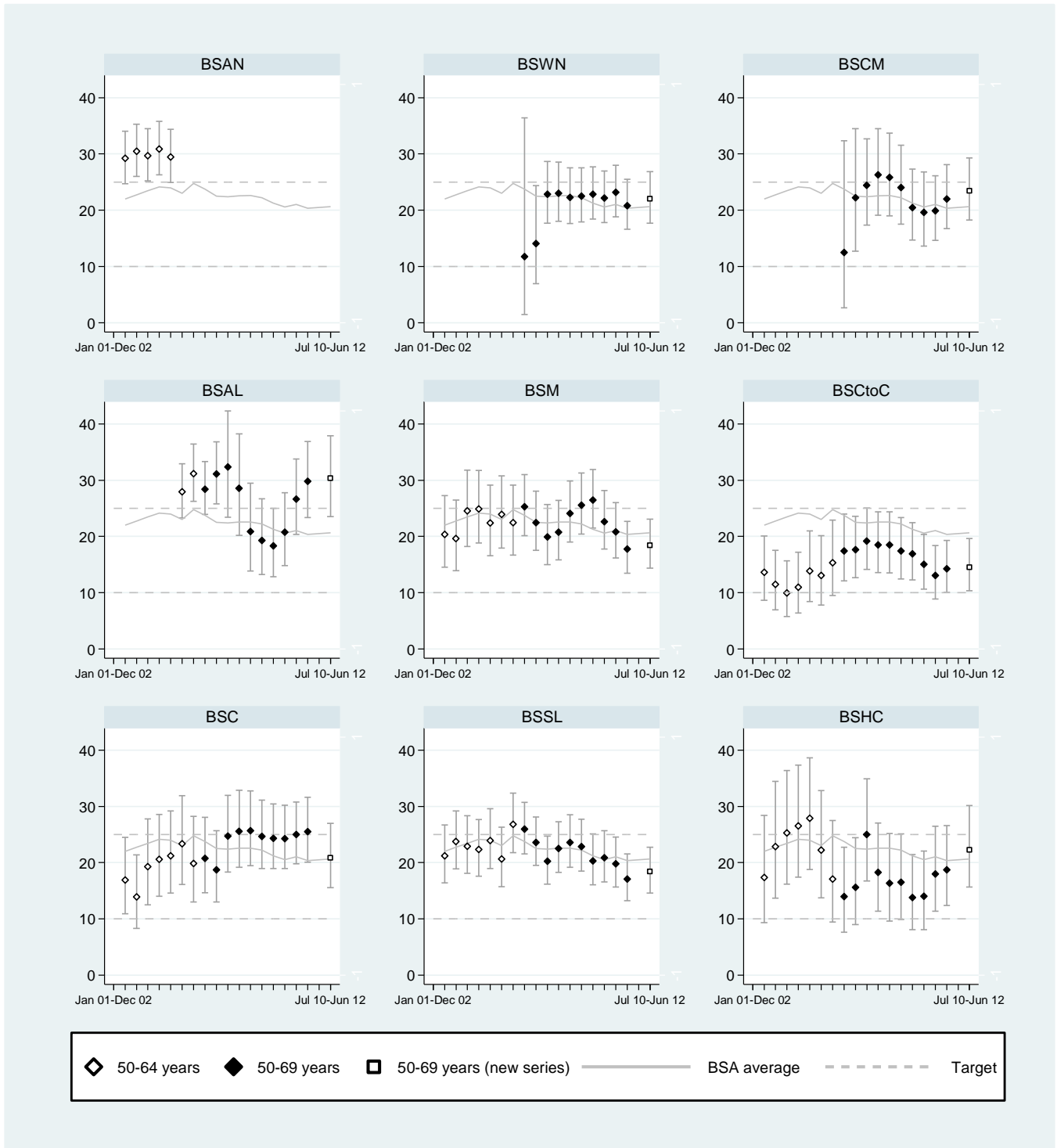
Table 3e: Women with DCIS as a percentage of all screen detected cancers, 2 years

	DCIS	Total cancers	% (95%CI)
<i>45-49 years</i>			
BSWN	27	87	31.0 (21.5-41.9)
BSCM	14	54	25.9 (15.0-39.7)
BSAL	11	47	23.4 (12.3-38.0)
BSM	17	67	25.4 (15.5-37.5)
BSCtoC	15	48	31.3 (18.7-46.3)
BSC	15	57	26.3 (15.5-39.7)
BSSL	19	78	24.4 (15.3-35.4)
BSHC	7	30	23.3 (9.9-42.3)
BSA Total	125	468	26.7 (22.8-31.0)
<i>50-69 years</i>			
BSWN	74	336	22.0 (17.7-26.8)
BSCM	57	243	23.5 (18.3-29.3)
BSAL	51	168	30.4 (23.5-37.9)
BSM	60	326	18.4 (14.3-23.0)
BSCtoC	35	241	14.5 (10.3-19.6)
BSC	44	211	20.9 (15.6-27.0)
BSSL	68	369	18.4 (14.6-22.8)
BSHC	31	139	22.3 (15.7-30.1)
BSA Total	420	2,033	20.7 (18.9-22.5)

Exact Binomial 95% confidence intervals presented

Note: Numbers of DCIS and invasive cancers are for those with known histology

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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 w ithin 10 w orking days	Women screened	% (95%CI)	Women notified w ithin 10 w orking days	Women screened	% (95%CI)
<i>45-49 years</i>						
BSWN	4,770	5,042	94.6 (93.9-95.2)	18,937	19,859	95.4 (95.1-95.6)
BSCM	3,446	3,560	96.8 (96.2-97.4)	12,420	12,905	96.2 (95.9-96.6)
BSAL	2,964	3,131	94.7 (93.8-95.4)	10,464	11,134	94.0 (93.5-94.4)
BSM	3,829	4,097	93.5 (92.7-94.2)	13,939	14,852	93.9 (93.5-94.2)
BSCtoC	3,352	3,421	98.0 (97.5-98.4)	13,200	13,529	97.6 (97.3-97.8)
BSC	2,873	3,018	95.2 (94.4-95.9)	11,326	11,784	96.1 (95.7-96.5)
BSSL	6,248	6,578	95.0 (94.4-95.5)	23,435	24,446	95.9 (95.6-96.1)
BSHC	929	1,290	72.0 (69.5-74.5)	5,955	7,023	84.8 (83.9-85.6)
BSA Total	28,411	30,137	94.3 (94.0-94.5)	109,676	115,532	94.9 (94.8-95.1)
<i>50-69 years</i>						
BSWN	13,944	14,352	97.2 (96.9-97.4) ✓✓ *	54,563	55,970	97.5 (97.4-97.6) ✓✓ *
BSCM	8,747	8,927	98.0 (97.7-98.3) ✓✓ *	31,988	32,768	97.6 (97.4-97.8) ✓✓ *
BSAL	7,698	7,987	96.4 (95.9-96.8) ✓✓ *	27,237	28,304	96.2 (96.0-96.4) ✓✓ *
BSM	13,198	13,824	95.5 (95.1-95.8) ✓✓ *	49,312	51,513	95.7 (95.5-95.9) ✓✓ *
BSCtoC	12,912	13,130	98.3 (98.1-98.6) ✓✓ *	45,995	46,753	98.4 (98.3-98.5) ✓✓ *
BSC	9,275	9,581	96.8 (96.4-97.1) ✓✓ *	35,984	36,972	97.3 (97.2-97.5) ✓✓ *
BSSL	20,276	20,840	97.3 (97.1-97.5) ✓✓ *	70,127	71,914	97.5 (97.4-97.6) ✓✓ *
BSHC	4,500	6,347	70.9 (69.8-72.0) *** *	22,143	26,039	85.0 (84.6-85.5) ** *
BSA Total	90,550	94,988	95.3 (95.2-95.5) ✓✓ *	337,349	350,233	96.3 (96.3-96.4) ✓✓ *

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 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

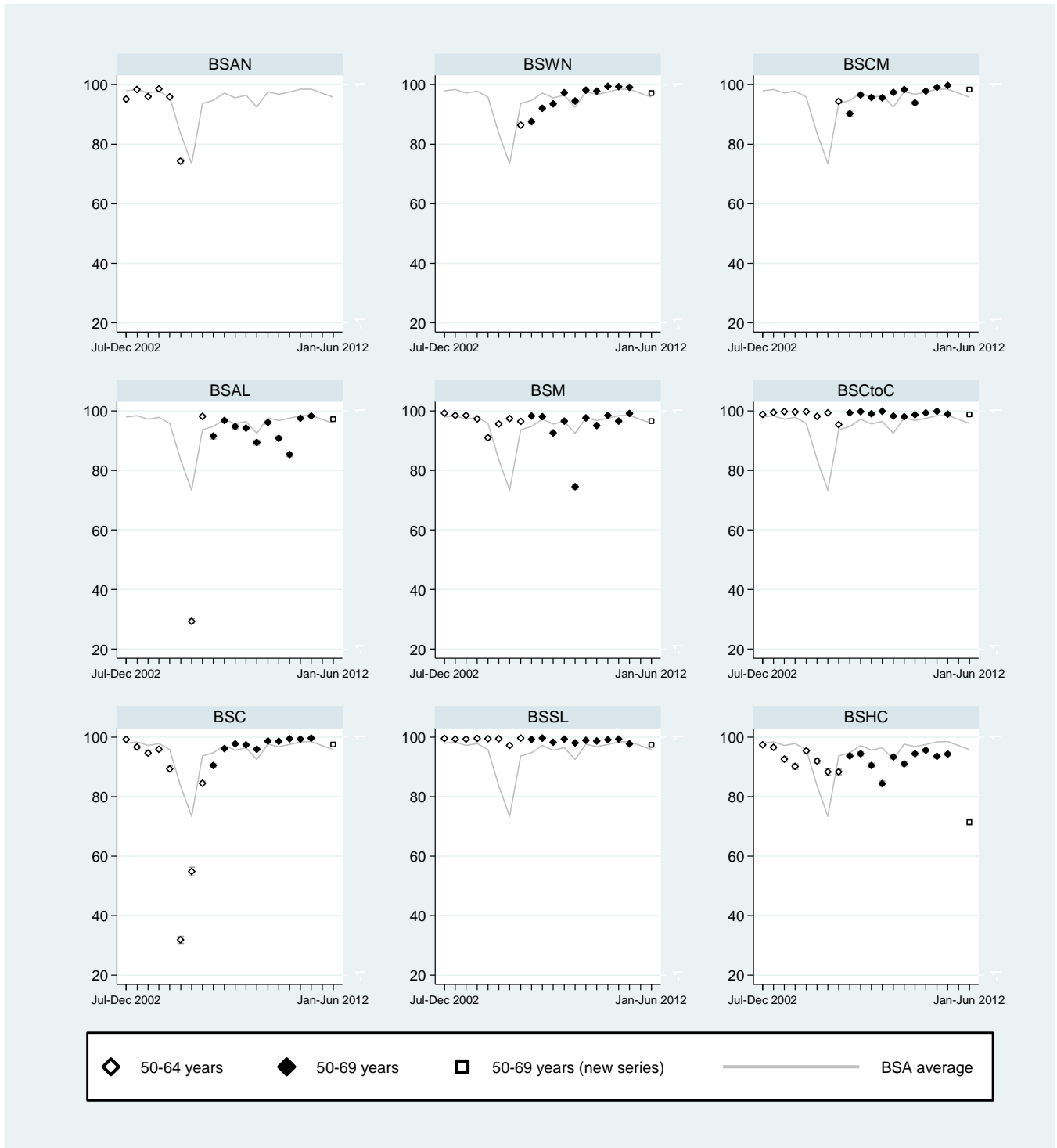
xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

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

Please note that data in the table above accounts for NZ National Statutory Holidays.

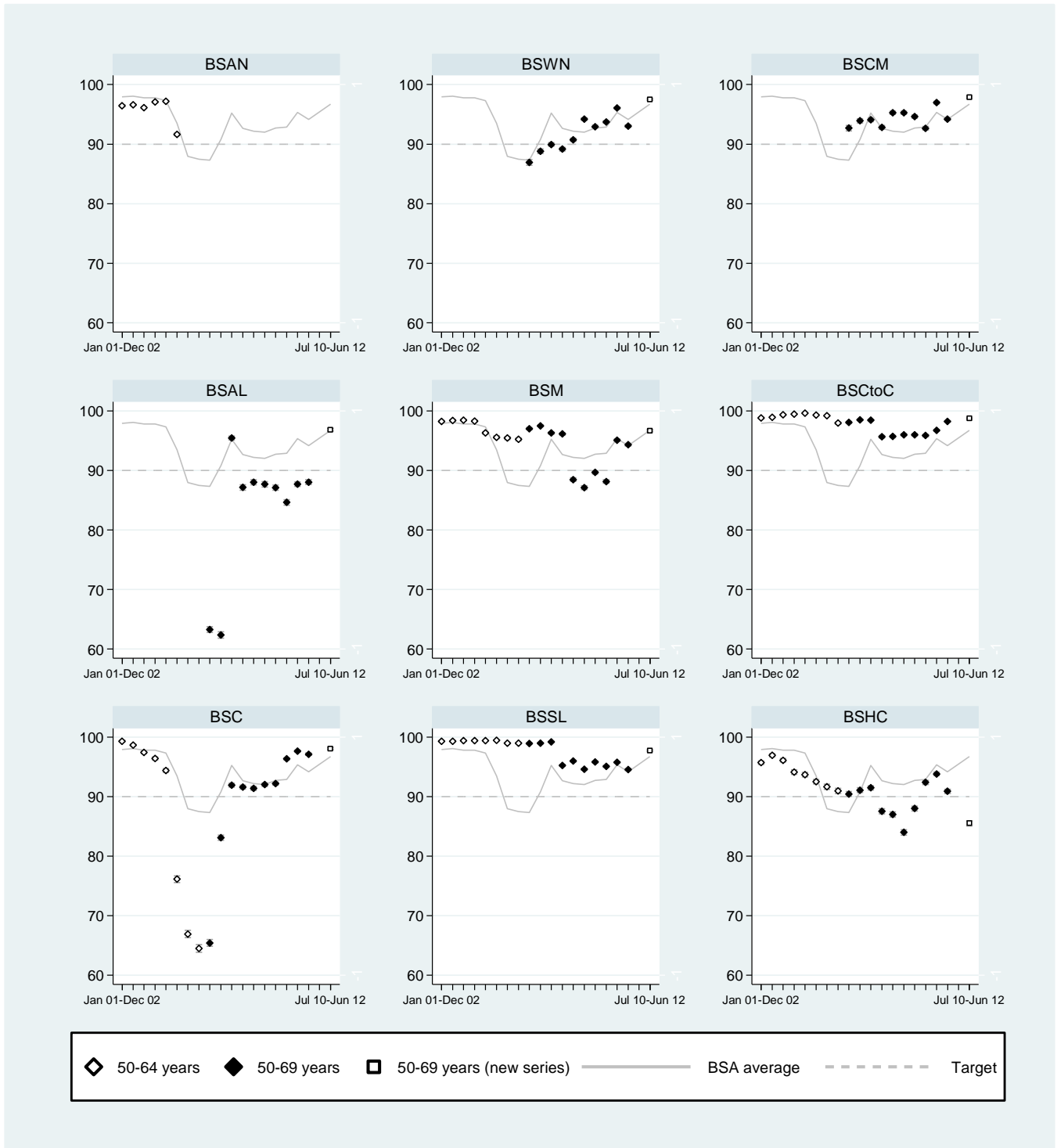
Extraction scripts for this indicator are being re-examined as well as investigation of data reporting from BSHC

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



Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jul 2010 - Jun 2012) are based on revised data extraction protocols

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)			
	Number	% (95%CI)	Number	% (95%CI)	Number	% (95%CI)	Number	% (95%CI)		
<i>45-49 years</i>										
BSWN	333	85.4 (81.5-88.7)	390	85.4 (81.5-88.7)	1,315	87.1 (85.3-88.8)	1,509	87.1 (85.3-88.8)		
BSCM	222	90.2 (85.8-93.6)	246	90.2 (85.8-93.6)	820	88.4 (86.1-90.4)	928	88.4 (86.1-90.4)		
BSAL	139	85.8 (79.5-90.8)	162	85.8 (79.5-90.8)	487	83.4 (80.1-86.3)	584	83.4 (80.1-86.3)		
BSM	252	83.7 (79.1-87.7)	301	83.7 (79.1-87.7)	974	88.9 (86.9-90.7)	1,095	88.9 (86.9-90.7)		
BSCtoC	110	86.6 (79.4-92.0)	127	86.6 (79.4-92.0)	474	87.8 (84.7-90.4)	540	87.8 (84.7-90.4)		
BSC	169	93.9 (89.3-96.9)	180	93.9 (89.3-96.9)	654	95.3 (93.5-96.8)	686	95.3 (93.5-96.8)		
BSSL	382	84.7 (81.0-87.9)	451	84.7 (81.0-87.9)	1,346	88.5 (86.8-90.1)	1,521	88.5 (86.8-90.1)		
BSHC	44	51.2 (40.1-62.1)	86	51.2 (40.1-62.1)	314	69.8 (65.3-74.0)	450	69.8 (65.3-74.0)		
BSA Total	1,651	85.0 (83.3-86.5)	1,943	85.0 (83.3-86.5)	6,384	87.3 (86.5-88.1)	7,313	87.3 (86.5-88.1)		
<i>50-69 years</i>										
BSWN	527	88.4 (85.6-90.9)	596	88.4 (85.6-90.9)	✓	ns	2,010	87.7 (86.3-89.0)	✓	*
BSCM	307	90.3 (86.6-93.2)	340	90.3 (86.6-93.2)	✓	ns	1,263	89.4 (87.7-90.9)	✓	ns
BSAL	208	79.4 (74.0-84.1)	262	79.4 (74.0-84.1)	xxx	*	770	81.3 (78.7-83.7)	xx	*
BSM	440	83.7 (80.2-86.7)	526	83.7 (80.2-86.7)	xx	*	1,736	87.9 (86.4-89.3)	✓	*
BSCtoC	269	85.9 (81.6-89.6)	313	85.9 (81.6-89.6)	✓	*	907	89.0 (86.9-90.9)	✓	ns
BSC	292	93.3 (89.9-95.8)	313	93.3 (89.9-95.8)	✓	ns	1,149	94.5 (93.1-95.7)	✓	*
BSSL	626	88.2 (85.6-90.5)	710	88.2 (85.6-90.5)	✓	ns	2,150	89.6 (88.3-90.8)	✓	ns
BSHC	126	63.0 (55.9-69.7)	200	63.0 (55.9-69.7)	xxx	*	640	72.9 (69.8-75.8)	xxx	*
BSA Total	2,795	85.7 (84.5-86.9)	3,260	85.7 (84.5-86.9)	✓	*	10,625	87.5 (86.9-88.1)	✓	*

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

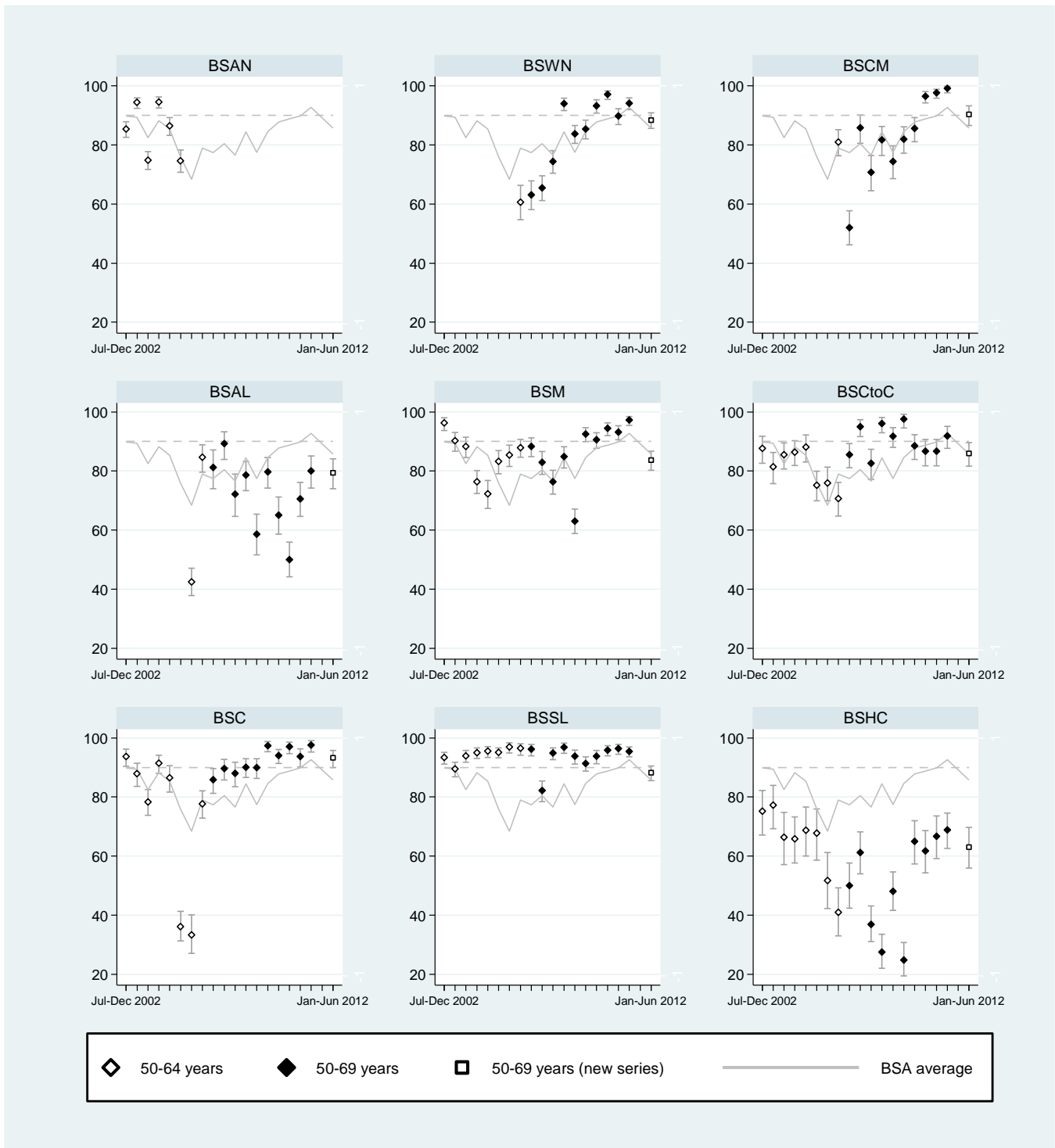
xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

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

Please note that data in the table above accounts for NZ National Statutory Holidays.

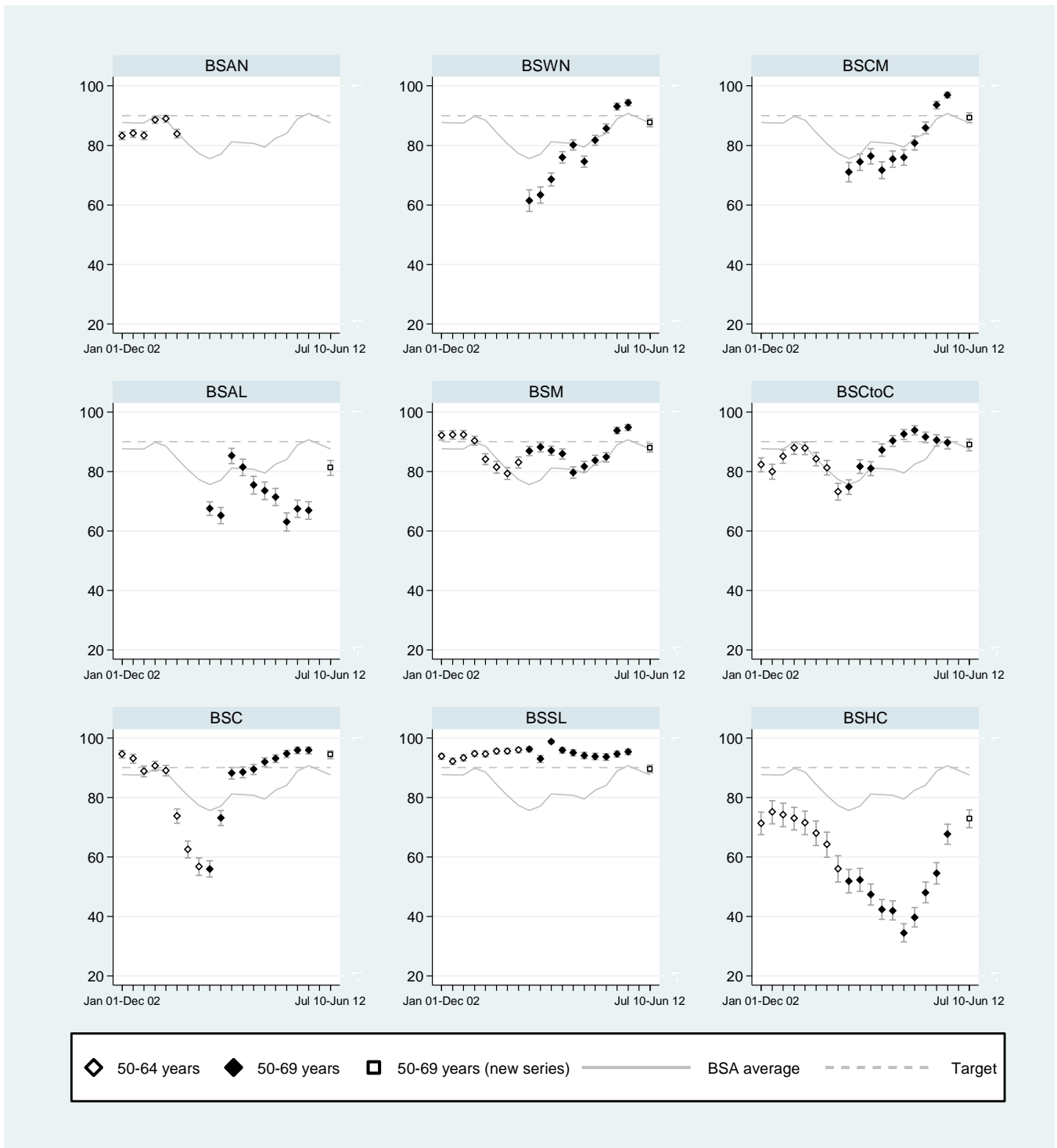
Extraction scripts for this indicator are being re-examined

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



Note: Data not reported for the period July-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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 w ithin 5 w orking days of assessment	Total needle biopsies	% (95%CI)	Needle biopsies w ithin 5 w orking days of assessment	Total needle biopsies	% (95%CI)				
<i>45-49 years</i>										
BSWN	109	117	93.2 (87.0-97.0)	410	430	95.3 (92.9-97.1)				
BSCM	108	118	91.5 (85.0-95.9)	342	392	87.2 (83.5-90.4)				
BSAL	54	59	91.5 (81.3-97.2)	211	231	91.3 (86.9-94.6)				
BSM	66	87	75.9 (65.5-84.4)	261	309	84.5 (79.9-88.3)				
BSCtoC	36	37	97.3 (85.8-99.9)	170	175	97.1 (93.5-99.1)				
BSC	37	39	94.9 (82.7-99.4)	142	152	93.4 (88.2-96.8)				
BSSL	95	117	81.2 (72.9-87.8)	293	364	80.5 (76.0-84.4)				
BSHC	16	19	84.2 (60.4-96.6)	86	100	86.0 (77.6-92.1)				
BSA Total	521	593	87.9 (85.0-90.4)	1,915	2,153	88.9 (87.5-90.2)				
<i>50-69 years</i>										
BSWN	195	208	93.8 (89.5-96.6)	✓	ns	749	791	94.7 (92.9-96.1)	✓✓	*
BSCM	146	160	91.3 (85.8-95.1)	✓	ns	593	655	90.5 (88.0-92.7)	✓	ns
BSAL	90	101	89.1 (81.3-94.4)	✓	ns	381	430	88.6 (85.2-91.4)	✓	ns
BSM	159	181	87.8 (82.2-92.2)	✓	ns	625	696	89.8 (87.3-91.9)	✓	ns
BSCtoC	136	138	98.6 (94.9-99.8)	✓✓	*	487	495	98.4 (96.8-99.3)	✓✓	*
BSC	85	90	94.4 (87.5-98.2)	✓	ns	345	373	92.5 (89.3-95.0)	✓	ns
BSSL	156	190	82.1 (75.9-87.3)	xx	*	604	717	84.2 (81.4-86.8)	xx	*
BSHC	67	77	87.0 (77.4-93.6)	✓	ns	281	316	88.9 (84.9-92.2)	✓	ns
BSA Total	1034	1145	90.3 (88.4-92.0)	✓	ns	4,065	4,473	90.9 (90.0-91.7)	✓	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

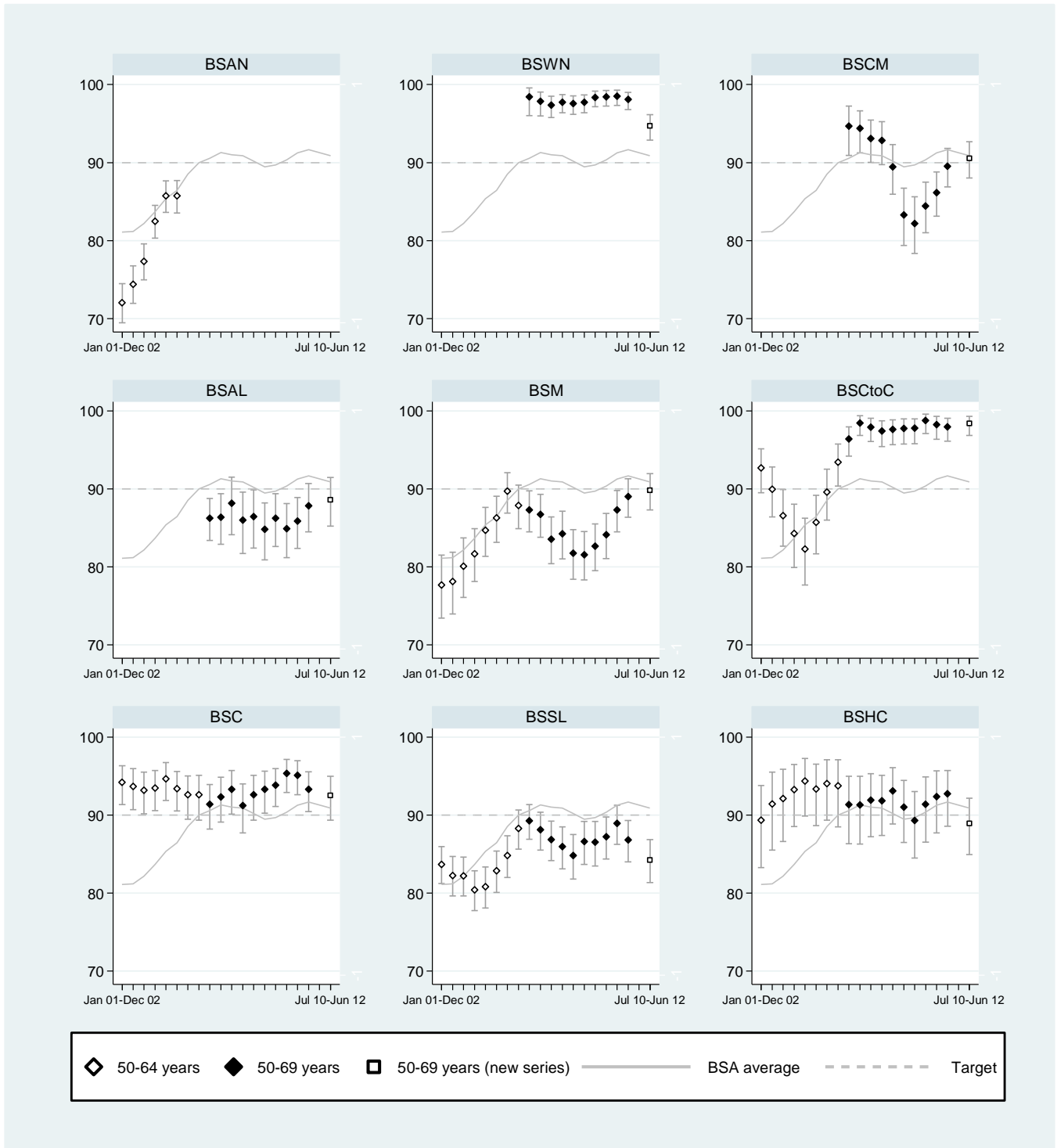
xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

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

Please note that data in the table above accounts for NZ National Statutory Holidays.

Extraction scripts for this indicator are being re-examined

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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)		
<i>45-49 years</i>								
BSWN	10	17		37	56	66.1 (52.2-78.2)		
BSCM	0	0		7	21	33.3 (14.6-57.0)		
BSAL	4	6		18	21	85.7 (63.7-97.0)		
BSM	10	11		20	27	74.1 (53.7-88.9)		
BSCtoC	2	5		4	12	33.3 (9.9-65.1)		
BSC	2	5		4	13	30.8 (9.1-61.4)		
BSSL	5	5		19	20	95.0 (75.1-99.9)		
BSHC	0	0		3	4	75.0 (19.4-99.4)		
BSA Total	33	49	67.3 (52.5-80.1)	112	174	64.4 (56.8-71.5)		
<i>50-69 years</i>								
BSWN	12	21		62	96	64.6 (54.2-74.1)	***	*
BSCM	2	3		8	29	27.6 (12.7-47.2)	***	*
BSAL	6	8		22	29	75.9 (56.5-89.7)	***	*
BSM	10	15		43	67	64.2 (51.5-75.5)	***	*
BSCtoC	8	13		10	17	58.8 (32.9-81.6)	***	*
BSC	8	10		19	25	76.0 (54.9-90.6)	✓	ns
BSSL	7	9		29	35	82.9 (66.4-93.4)	✓	ns
BSHC	3	4		5	10	50.0 (18.7-81.3)	***	*
BSA Total	56	83	67.5 (56.3-77.4)	198	308	64.3 (58.7-69.6)	***	*

Note: 6 monthly proportions for Lead Providers not shown due to small numbers.

Exact Binomial 95% confidence intervals presented

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

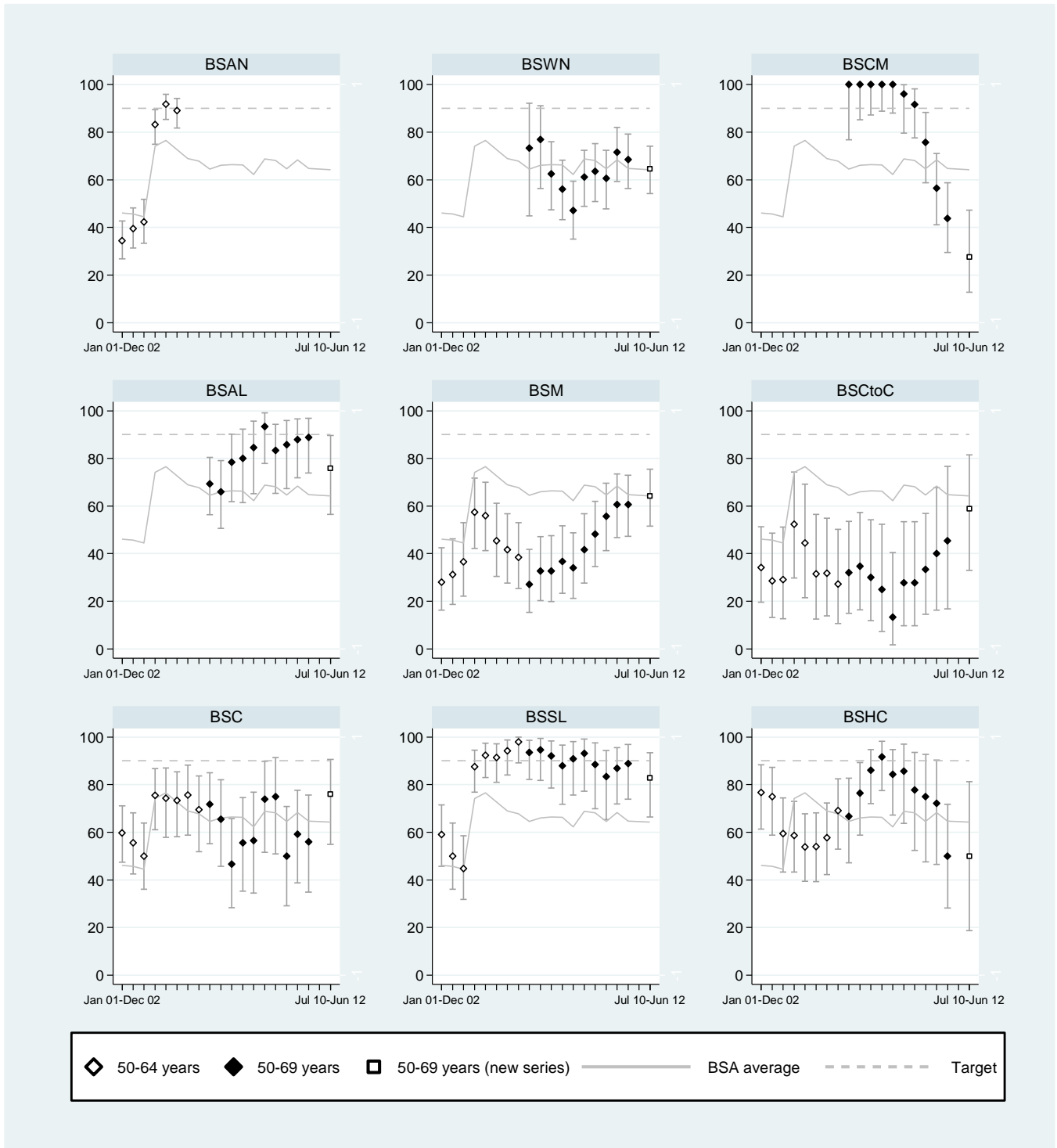
xx Difference of ≥ 5-9% magnitude worse than target value and statistically significant

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

Please note that data in the table above accounts for NZ National Statutory Holidays.

Extraction scripts for this indicator are being re-examined

Figure 5c2: Proportion of women having an open biopsy procedure within 20 working days, 2 years*



*Note: Data from the Jul 07- Jun09 biennium onwards 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'. Data not reported for the period January 2010-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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)				
<i>45-49 years</i>										
BSWN	100	118	84.7 (77.0-90.7)	367	432	85.0 (81.2-88.2)				
BSCM	97	118	82.2 (74.1-88.6)	337	392	86.0 (82.1-89.3)				
BSAL	50	62	80.6 (68.6-89.6)	184	234	78.6 (72.8-83.7)				
BSM	56	87	64.4 (53.4-74.4)	237	309	76.7 (71.6-81.3)				
BSCtoC	25	37	67.6 (50.2-82.0)	145	176	82.4 (75.9-87.7)				
BSC	35	39	89.7 (75.8-97.1)	132	152	86.8 (80.4-91.8)				
BSSL	101	117	86.3 (78.7-92.0)	322	364	88.5 (84.7-91.6)				
BSHC	9	19	47.4 (24.4-71.1)	76	101	75.2 (65.7-83.3)				
BSA Total	473	597	79.2 (75.8-82.4)	1,800	2,160	83.3 (81.7-84.9)				
BSWN	172	208	82.7 (76.9-87.6)	xx	*	671	797	84.2 (81.5-86.7)	xx	*
BSCM	132	160	82.5 (75.7-88.0)	xx	*	569	655	86.9 (84.0-89.4)	✓	*
BSAL	71	102	69.6 (59.7-78.3)	xxx	*	329	432	76.2 (71.9-80.1)	xxx	*
BSM	140	181	77.3 (70.6-83.2)	xxx	*	549	697	78.8 (75.5-81.7)	xxx	*
BSCtoC	114	138	82.6 (75.2-88.5)	xx	*	435	495	87.9 (84.7-90.6)	✓	ns
BSC	80	90	88.9 (80.5-94.5)	✓	ns	322	373	86.3 (82.4-89.6)	✓	*
BSSL	168	190	88.4 (83.0-92.6)	✓	ns	662	717	92.3 (90.1-94.2)	✓	*
BSHC	57	77	74.0 (62.8-83.4)	xxx	*	257	316	81.3 (76.6-85.5)	xx	*
BSA Total	934	1146	81.5 (79.1-83.7)	xx	*	3,794	4,482	84.6 (83.6-85.7)	xx	*

Exact Binomial 95% confidence intervals presented

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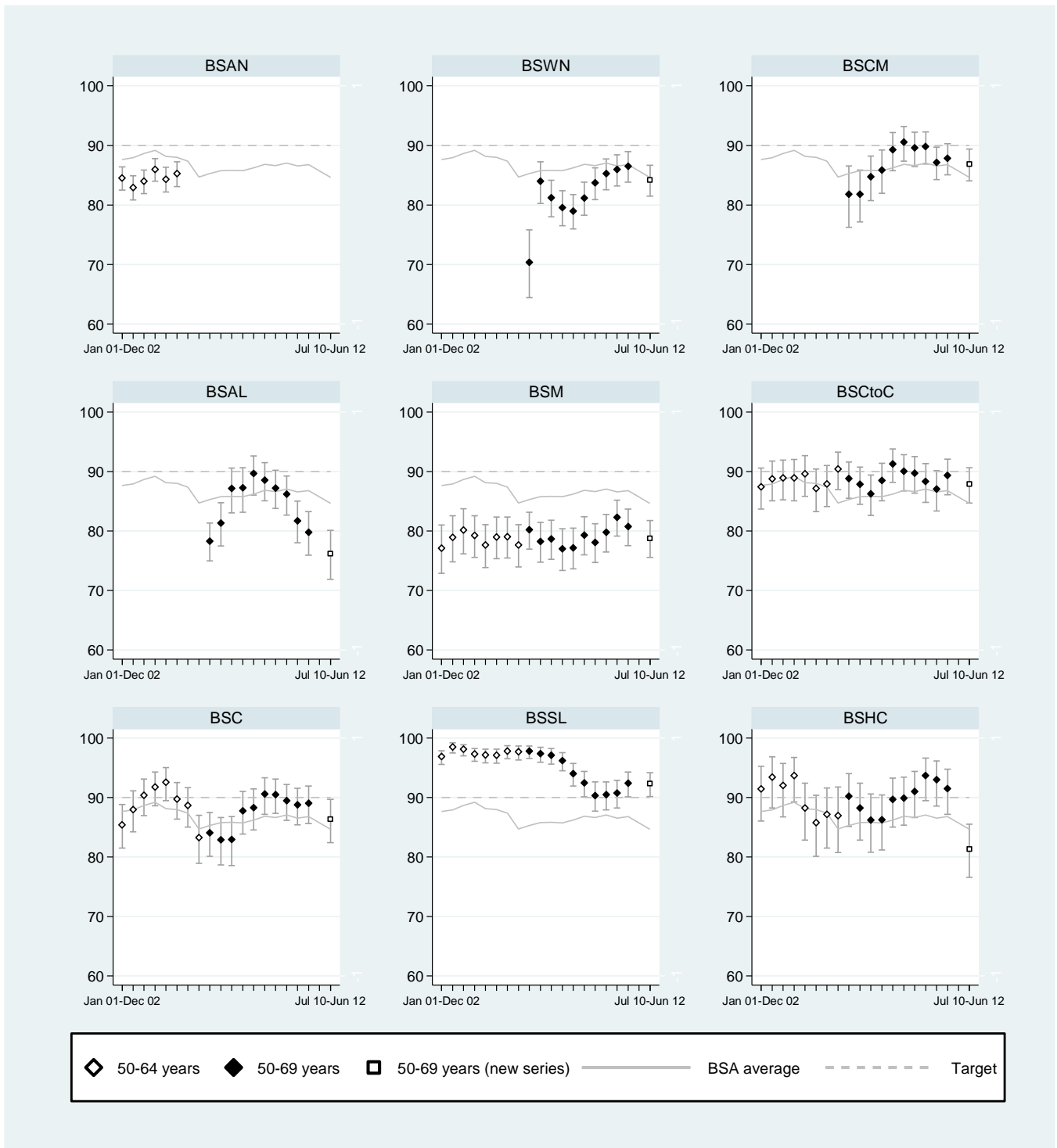
✓✓✓ Difference of ≥ 10% magnitude better than target value and statistically significant

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

Please note that data in the table above accounts for NZ National Statutory Holidays.

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



Note: Data not reported for the period January 2010-December 2011; Data for the most recent period (Jan-Jun, 2012) are based on revised data extraction protocols

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*
2012	BSWN	Jan-Jun, 2012	27860	25270	20950	19420	15110	80750	27860	25270	20950	19420	15110	80750
2011	BSWN	Jan-Jun, 2011	27930	24290	20310	18890	14610	78100	27930	24290	20310	18890	14610	78100
2010	BSWN	Jul-Dec, 2010	27485	24390	20450	18795	14330	77965	27485	24390	20450	18795	14330	77965
2010	BSWN	Jan-Jun, 2010	27185	23560	20155	18030	13840	75585	27335	23975	20303	18413	14085	76775
2009	BSWN	Jul-Dec, 2009	27185	23560	20155	18030	13840	75585	27185	23560	20155	18030	13840	75585
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
2012	BSAL	Jan-Jun, 2012	16610	14360	12000	9980	7150	43490	16610	14360	12000	9980	7150	43490
2011	BSAL	Jan-Jun, 2011	16510	14000	11560	9690	6960	42210	16510	14000	11560	9690	6960	42210
2010	BSAL	Jul-Dec, 2010	17490	14460	12020	9940	7020	43440	17490	14460	12020	9940	7020	43440
2010	BSAL	Jan-Jun, 2010	17090	14040	11660	9450	6880	42030	17290	14250	11840	9695	6950	42735
2009	BSAL	Jul-Dec, 2009	17090	14040	11660	9450	6880	42030	17090	14040	11660	9450	6880	42030
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
2012	BSCM	Jan-Jun, 2012	18480	15990	13120	11540	8790	49440	18480	15990	13120	11540	8790	49440
2011	BSCM	Jan-Jun, 2011	18210	15320	12800	11130	8390	47640	18210	15320	12800	11130	8390	47640
2010	BSCM	Jul-Dec, 2010	17295	14705	12530	11030	8345	46610	17295	14705	12530	11030	8345	46610
2010	BSCM	Jan-Jun, 2010	16900	14215	12230	10610	8005	45060	17098	14460	12380	10820	8175	45835
2009	BSCM	Jul-Dec, 2009	16900	14215	12230	10610	8005	45060	16900	14215	12230	10610	8005	45060
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

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*
2012	BSM	Jan-Jun, 2012	25010	24020	21200	19850	15770	80840	25010	24020	21200	19850	15770	80840
2011	BSM	Jan-Jun, 2011	25260	23370	20680	19220	15630	78900	25260	23370	20680	19220	15630	78900
2010	BSM	Jul-Dec, 2010	24720	23195	20285	18320	14670	76470	24720	23195	20285	18320	14670	76470
2010	BSM	Jan-Jun, 2010	24930	22690	19720	17545	14285	74240	24825	22943	20003	17933	14478	75355
2009	BSM	Jul-Dec, 2009	24930	22690	19720	17545	14285	74240	24930	22690	19720	17545	14285	74240
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
2012	BSCtoC	Jan-Jun, 2012	20015	19520	17255	16225	12550	65550	20015	19520	17255	16225	12550	65550
2011	BSCtoC	Jan-Jun, 2011	20710	19020	16980	15655	12395	64050	20710	19020	16980	15655	12395	64050
2010	BSCtoC	Jul-Dec, 2010	20410	19235	16785	15170	11975	63165	20410	19235	16785	15170	11975	63165
2010	BSCtoC	Jan-Jun, 2010	20795	18765	16520	14605	11865	61755	20603	19000	16653	14888	11920	62460
2009	BSCtoC	Jul-Dec, 2009	20795	18765	16520	14605	11865	61755	20795	18765	16520	14605	11865	61755
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

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

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*
2012	BSC	Jan-Jun, 2012	17975	16205	13575	12420	9305	51505	17975	16205	13575	12420	9305	51505
2011	BSC	Jan-Jun, 2011	18030	15790	13300	12105	9155	50350	18030	15790	13300	12105	9155	50350
2010	BSC	Jul-Dec, 2010	18430	15895	13275	12190	9000	50360	18430	15895	13275	12190	9000	50360
2010	BSC	Jan-Jun, 2010	18560	15205	13110	11755	8810	48880	18495	15550	13193	11973	8905	49620
2009	BSC	Jul-Dec, 2009	18560	15205	13110	11755	8810	48880	18560	15205	13110	11755	8810	48880
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
2012	BSSL	Jan-Jun, 2012	28395	27075	23855	22590	17055	90575	28395	27075	23855	22590	17055	90575
2011	BSSL	Jan-Jun, 2011	28755	26365	23190	22045	16555	88155	28755	26365	23190	22045	16555	88155
2010	BSSL	Jul-Dec, 2010	27570	25780	22545	21100	15720	85145	27570	25780	22545	21100	15720	85145
2010	BSSL	Jan-Jun, 2010	27600	25185	22370	20145	15380	83080	27585	25483	22458	20623	15550	84113
2009	BSSL	Jul-Dec, 2009	27600	25185	22370	20145	15380	83080	27600	25185	22370	20145	15380	83080
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

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

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*
2012	BSHC	Jan-Jun, 2012	10990	10845	9380	8805	6630	35660	10990	10845	9380	8805	6630	35660
2011	BSHC	Jan-Jun, 2011	11310	10585	9120	8560	6600	34865	11310	10585	9120	8560	6600	34865
2010	BSHC	Jul-Dec, 2010	11055	10330	8880	8180	6365	33755	11055	10330	8880	8180	6365	33755
2010	BSHC	Jan-Jun, 2010	11285	10125	8690	7950	6275	33040	11170	10228	8785	8065	6320	33398
2009	BSHC	Jul-Dec, 2009	11285	10125	8690	7950	6275	33040	11285	10125	8690	7950	6275	33040
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
2012	BSA Total	Jan-Jun, 2012	165335	15328	13133	12083	92360	497810	16533	15328	13133	12083	92360	497810
2011	BSA Total	Jan-Jun, 2011	166715	14874	12794	11729	90295	484270	16671	14874	12794	11729	90295	484270
2010	BSA Total	Jul-Dec, 2010	164455	14799	12677	11472	87425	476910	16445	14799	12677	11472	87425	476910
2010	BSA Total	Jan-Jun, 2010	164345	14378	12445	11009	85340	463670	16440	14588	12561	11240	86383	470290
2009	BSA Total	Jul-Dec, 2009	164345	14378	12445	11009	85340	463670	16434	14378	12445	11009	85340	463670
2009	BSA Total	Jan-Jun, 2009	162465	13945	12237	10509	83155	450075	16444	14137	12276	10855	83760	456450
2008	BSA Total	Jul-Dec, 2008	162465	13945	12237	10509	83155	450075	16246	13945	12237	10509	83155	450075
2008	BSA Total	Jan-Jun, 2008	158510	13560	12160	98175	81945	437325	16094	13737	12178	10082	83710	443690
2007	BSA Total	Jul-Dec, 2007	158510	13560	12160	98175	81945	437325	15851	13560	12160	98175	81945	437325
2007	BSA Total	Jan-Jun, 2007	153640	13206	12125	92870	78415	424595	15607	13383	12142	95523	80180	430960
2006	BSA Total	Jul-Dec, 2006	153640	13206	12125	92870	78415	424595	15364	13206	12125	92870	78415	424595
2006	BSA Total	Jan-Jun, 2006		12868	11770	91210		337595		13037	11947	92040		341888
2005	BSA Total	Jul-Dec, 2005		12868	11770	91210		337595		12868	11770	91210		337595
2005	BSA Total	Jan-Jun, 2005		12631	11292	89045		328280		12728	11488	89913		332080
2004	BSA Total	Jul-Dec, 2004		12631	11292	89045		328280		12631	11292	89045		328280
2004	BSA Total	Jan-Jun, 2004		12411	10777	86735		318625		12521	11035	87890		323453
2003	BSA Total	Jul-Dec, 2003		12411	10777	86735		318625		12411	10777	86735		318625
2003	BSA Total	Jan-Jun, 2003		12497	10373	84750		313460		12302	10301	84181		310212
2002	BSA Total	Jul-Dec, 2002		12192	98247	81626		301798		12192	98247	81626		301798

*Note: age 45-69 year populations are 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*		
			Māori	Pacific	Other	Māori	Pacific	Other	Māori	Pacific	Other	Māori	Pacific	Other
2012	BSWN	Jan-Jun, 2012	3290	1340	23230	7760	2880	70110	3290	1340	23230	7760	2880	70110
2011	BSWN	Jan-Jun, 2011	3390	1260	23280	7370	2750	67980	3390	1260	23280	7370	2750	67980
2010	BSWN	Jul-Dec, 2010	3520	1325	22640	7350	2885	67730	3520	1325	22640	7350	2885	67730
2010	BSWN	Jan-Jun, 2010	3460	1265	22460	7080	2745	65760	3490	1295	22550	7215	2815	66745
2009	BSWN	Jul-Dec, 2009	3460	1265	22460	7080	2745	65760	3460	1265	22460	7080	2745	65760
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
2012	BSAL	Jan-Jun, 2012	1130	1630	13850	2710	3670	37110	1130	1630	13850	2710	3670	37110
2011	BSAL	Jan-Jun, 2011	1140	1590	13780	2620	3620	35970	1140	1590	13780	2620	3620	35970
2010	BSAL	Jul-Dec, 2010	1170	1790	14530	2780	3790	36870	1170	1790	14530	2780	3790	36870
2010	BSAL	Jan-Jun, 2010	1160	1730	14200	2670	3660	35700	1165	1760	14365	2725	3725	36285
2009	BSAL	Jul-Dec, 2009	1160	1730	14200	2670	3660	35700	1160	1730	14200	2670	3660	35700
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
2012	BSCM	Jan-Jun, 2012	2460	3290	12730	5340	7420	36680	2460	3290	12730	5340	7420	36680
2011	BSCM	Jan-Jun, 2011	2440	3120	12650	5100	7030	35510	2440	3120	12650	5100	7030	35510
2010	BSCM	Jul-Dec, 2010	2510	2965	11820	5240	6420	34950	2510	2965	11820	5240	6420	34950
2010	BSCM	Jan-Jun, 2010	2450	2790	11660	4960	6100	34000	2480	2878	11740	5100	6260	34475
2009	BSCM	Jul-Dec, 2009	2450	2790	11660	4960	6100	34000	2450	2790	11660	4960	6100	34000
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	31050	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

*Note: age 45-69 year populations are 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*		
			Māori	Pacific	Other	Māori	Pacific	Other	Māori	Pacific	Other	Māori	Pacific	Other
2012	BSM	Jan-Jun, 2012	5200	430	19380	12460	970	67410	5200	430	19380	12460	970	67410
2011	BSM	Jan-Jun, 2011	5240	390	19630	11980	910	66010	5240	390	19630	11980	910	66010
2010	BSM	Jul-Dec, 2010	5380	400	18940	12230	810	63430	5380	400	18940	12230	810	63430
2010	BSM	Jan-Jun, 2010	5380	360	19190	11670	790	61780	5380	380	19065	11950	800	62605
2009	BSM	Jul-Dec, 2009	5380	360	19190	11670	790	61780	5380	360	19190	11670	790	61780
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
2012	BSCtoC	Jan-Jun, 2012	3980	345	15690	9430	690	55430	3980	345	15690	9430	690	55430
2011	BSCtoC	Jan-Jun, 2011	4040	345	16325	8990	690	54370	4040	345	16325	8990	690	54370
2010	BSCtoC	Jul-Dec, 2010	4105	340	15965	9095	700	53370	4105	340	15965	9095	700	53370
2010	BSCtoC	Jan-Jun, 2010	4135	325	16335	8665	620	52470	4120	333	16150	8880	660	52920
2009	BSCtoC	Jul-Dec, 2009	4135	325	16335	8665	620	52470	4135	325	16335	8665	620	52470
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

*Note: age 45-69 year populations are 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*		
			Māori	Pacific	Other	Māori	Pacific	Other	Māori	Pacific	Other	Māori	Pacific	Other
2012	BSC	Jan-Jun, 2012	1920	1045	15010	4250	2540	44715	1920	1045	15010	4250	2540	44715
2011	BSC	Jan-Jun, 2011	1880	1010	15140	4060	2485	43805	1880	1010	15140	4060	2485	43805
2010	BSC	Jul-Dec, 2010	2010	1080	15340	4120	2540	43700	2010	1080	15340	4120	2540	43700
2010	BSC	Jan-Jun, 2010	2010	1040	15510	3860	2430	42590	2010	1060	15425	3990	2485	43145
2009	BSC	Jul-Dec, 2009	2010	1040	15510	3860	2430	42590	2010	1040	15510	3860	2430	42590
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
2012	BSSL	Jan-Jun, 2012	1750	390	26255	3900	835	85840	1750	390	26255	3900	835	85840
2011	BSSL	Jan-Jun, 2011	1730	380	26645	3750	780	83625	1730	380	26645	3750	780	83625
2010	BSSL	Jul-Dec, 2010	1645	335	25590	3450	615	81080	1645	335	25590	3450	615	81080
2010	BSSL	Jan-Jun, 2010	1620	340	25640	3295	585	79200	1633	338	25615	3373	600	80140
2009	BSSL	Jul-Dec, 2009	1620	340	25640	3295	585	79200	1620	340	25640	3295	585	79200
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: age 45-69 year populations are 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*		
			Māori	Pacific	Other	Māori	Pacific	Other	Māori	Pacific	Other	Māori	Pacific	Other
2012	BSHC	Jan-Jun, 2012	760	100	10130	1670	210	33780	760	100	10130	1670	210	33780
2011	BSHC	Jan-Jun, 2011	780	100	10430	1540	205	33120	780	100	10430	1540	205	33120
2010	BSHC	Jul-Dec, 2010	745	60	10250	1405	180	32170	745	60	10250	1405	180	32170
2010	BSHC	Jan-Jun, 2010	745	70	10470	1350	180	31510	745	65	10360	1378	180	31840
2009	BSHC	Jul-Dec, 2009	745	70	10470	1350	180	31510	745	70	10470	1350	180	31510
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
2012	BSA Total	Jan-Jun, 2012	20490	8570	136275	47520	19215	431075	20490	8570	136275	47520	19215	431075
2011	BSA Total	Jan-Jun, 2011	20640	8195	137880	45410	18470	420390	20640	8195	137880	45410	18470	420390
2010	BSA Total	Jul-Dec, 2010	21085	8295	135075	45670	17940	413300	21085	8295	135075	45670	17940	413300
2010	BSA Total	Jan-Jun, 2010	20960	7920	135465	43550	17110	403010	21023	8108	135270	44610	17525	408155
2009	BSA Total	Jul-Dec, 2009	20960	7920	135465	43550	17110	403010	20960	7920	135465	43550	17110	403010
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: age 45-69 year populations are 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

