Public Health Agency

Improving Your Health and Wellbeing

NORTHERN IRELAND BREAST SCREENING PROGRAMME

ANNUAL REPORT & STATISTICAL BULLETIN 2009-2010

Breast Screening

August 2011

QUALITY ASSURANCE REFERENCE CENTRE

Contents

Summary

This annual report and statistical bulletin describes key issues relating to the Northern Ireland Breast Screening Programme and its performance in 2009/10. It compares performance with previous years and with data from the English programme.

In March 2009 the Northern Ireland Breast Screening Programme was extended to automatically invite women aged 50 – 70 every 3 years. Prior to this women aged 50 – 64 were invited.

Most of the data in this report were obtained from the National Breast Screening System (NBSS). This is the IT system that supports the breast screening programme. In December 2010 an electronic link was established between NBSS and NHAIS (Exeter), the IT system that supports primary care. This link will allow us to establish better failsafe procedures - ensure that all women who should be invited are invited for breast screening. It will also allow us to calculate programme coverage and produce some additional reports. Coverage is the percentage of eligible women in an area who have had a recorded test result at least once in the last 3 years. However, these data will not be available until December 2013 when 3 year's worth of data are on the system.

In 2009/10 a total of 71,773 women aged 50-70 were invited and 53,454 women were screened; giving an uptake of 74% in 2009/10 (standard > 70%). Uptake is the percentage of women who attend each year, following an invitation. This means that over 25% of women who were invited did not take up the offer of screening mammography. The PHA is currently looking at ways of ensuring that all eligible women are able to make an informed choice about attending for breast screening.

Most women who attend for breast screening mammography will be identified as having normal mammograms. 96.6% of these women received their test results within 2 weeks (standard $\geq$90%).

3.7% of women who attended for screening mammography were found to have an abnormality on their mammograms and were referred for further assessment. 94.4% of these women were offered an assessment clinic appointment within 3 weeks (standard $\geq$ 90%). Younger women are more likely to be called back for assessment, but cancer is more likely to be found in older women.

Diagnosis before surgery is made by taking a biopsy at the assessment clinic. 95.9% of women with cancers detected by screening had the diagnosis confirmed before surgery (standard ≥ 80%). The diagnostic accuracy of biopsies taken at assessment clinics is high. 95% of women only required one visit to the assessment clinic to have cytology/core biopsy taken.

A total of 399 cancers were detected in 2009/10. Of these 324 were invasive cancers and 75 were ductal carcinoma in situ (DCIS). Of the 324 invasive cancers 180 (55%) were less than 15 mm in diameter (small invasive cancers). A proportion of cases of DCIS will eventually become invasive (around a third). However, it is not yet possible to identify which ones will, and which won't, become invasive. All women diagnosed with this disease are therefore offered treatment.

5.8 per 1,000 women screened for the first time (aged under 53) were diagnosed with an invasive breast cancer (standard ≥ 2.7). The figure for women attending subseqent screening tests was 4.5 per 1,000 (standard ≥ 3.0).

2.7 per 1,000 women screened for the first time (aged under 53) had a small invasive cancer (standard > 1.5). The figure for women attending for subsequent screening tests was 2.9 per 1,000 (standard > 1.65).

The waiting times for surgery are the lowest in the UK. 76.2% of women diagnosed with an invasive cancer had breast conserving surgery. The remainder underwent mastectomy.

The proportion of women who had a surgical operation for what turned out to be benign disease was 1.5 per 1,000 for the prevalent (first) screen (standard < 3.6 per 1,000) and 0.3 per 1,000 for incident (subsequent) screens (standard < 2 per 1,000).

23% of women with invasive cancer required a repeat surgical operation. In addition 28% of women with non or micro-invasive cancers needed repeat surgery.

95.8% of women were offered an appointment for mammography screening within 36 months of their previous normal screen (standard ≥ 90%).

These are very satisfactory statistics and show that the Northern Ireland Breast Screening Programme was performing well in 2009/10 and met each of the key standards. A few standards relating to process measures were not achieved by some breast screening units. Comparison with previous years shows the significant improvements that individual breast screening units have made in process measures such as screen to routine recall, screen to assessment and round length. Comparison with statistics for England indicates that there may be potential for improvement in the invasive cancer diagnosis rate: even though the standard and target were met. However, it is recognised that the prevalence of breast cancer is higher in England than in Northern Ireland.

Dr Adrian Mairs
Quality Assurance Director
NI Breast Screening Programme

Ms Clare Hall
Information Officer
NI Breast Screening Programme

Introduction

Regular breast screening reduces the risk of death from breast cancer

The aim of breast screening is to prevent deaths from breast cancer. Regular mammography reduces mortality from breast cancer by 35% in women aged 50 to 69 who attend for screening. In Northern Ireland eligible[1] women aged 50 – 70 are invited for breast screening every 3 years. Women over 70 years of age are not automatically invited for screening, but are encouraged to make their own appointment by contacting their local screening unit.

There are four breast screening units in Northern Ireland. These are the:

Eastern Breast Screening Unit at 12-22 Linenhall Street, Belfast (covers the Belfast and South Eastern Trust areas);
Northern Breast Screening Unit at Antrim Area Hospital (covers the Northern Trust area);
Southern Breast Screening Unit at Lurgan Hospital (covers the Southern Trust area); and
Western Breast Screening Unit at Altnagelvin Area Hospital (covers the Western Trust area).

Each unit provides access to screening on mobile breast screening trailers at a variety of locations throughout Northern Ireland.

The Quality Assurance Reference Centre (QARC) is part of the Public Health Agency. It provides the quality assurance function for the three cancer screening programmes (breast, bowel and cervical). The purpose of quality assurance in the breast screening programme is the:

- maintenance of minimum standards; and
- continuous improvement in the performance of all aspects of the screening programme

In order to ensure that participants have access to a high quality service wherever they reside.

[1] Women who have had bilateral mastectomy are excluded from the eligible population.

Key Developments in 2009/10

In March 2009 the Breast Screening Programme was extended to invite eligible women aged 50 – 70

There were two significant developments in the programme in 2009/10. In March 2009 the Northern Ireland Breast Screening Programme was extended to automatically invite women aged 50 – 70 every 3 years. Prior to this women aged 50 – 64 were invited. As women are invited by general practice every 3 years, we will not have a full, regional set of data for women aged 50 – 70 until March 2012. This report shows data for women aged 50 – 64 (as these data can be compared with previous years) and data for women aged 50 – 70 (for whom we only currently have a single year's worth of data).

The National Breast Screening System (NBSS) is the IT system that supports the breast screening programme. In December 2010 an electronic link was established between NBSS and NHAIS (Exeter system), the IT system that supports primary care. This link will allow us to establish better failsafe procedures to ensure that all women who should be invited are invited for breast screening. It will also provide data on the coverage of the programme. Coverage is defined as the proportion of women resident and eligible for screening who have had a screening mammogram at least once in the previous three years.

Statistics

The Quality Assurance Reference Centre regularly monitors the performance of the Northern Ireland Breast Screening Programme

The Quality Assurance Reference Centre (QARC) calculates the statistics for each of the four breast screening units using standardised Korner returns:

KC62 – Annual return made by trusts on: outcome of initial screen, outcome of assessment (including cytology and histology), cancers diagnosed (by size and type) and overall outcome measures (uptake, referral rate, non-invasive cancers, benign biopsy rate, invasive cancer detection rate, referral for cytology/ biopsy, malignant:benign ratio for surgery, early recall rate); by 1st invitation, previous non-attenders, last screen within 5 years, last screen more than 5 years, early recall, self referrals, all women; by age.

KC63 – Annual return made by trusts on: numbers of eligible, invited and screened women by age, numbers recalled, numbers self or GP referred, and time since most recent screen in 12 month blocks.

KC62 data are obtained from the National Breast Screening System (NBSS). KC63 data will not be available until December 2013 when 3 year's worth of data will be on the system (as the breast screening programme is a 3 yearly rolling programme).

Women with a date of first offered screening appointment between 01/04/2009 and 31/03/2010 were used to produce this report. Comparative figures for the previous 2 years (5 years for uptake) and from the English NHS Breast Screening Programme are also shown. English data are taken from the following publications:

Overcoming barriers. NHS Breast Screening Programme Annual Review 2010[2]; and The Information Centre for Health and Social Care, Breast Screening Programme 2009/2010 Report[3]

[2] www.cancerscreening.nhs.uk/breastscreen/publications/nhsbsp-annualreview2010.pdf
[3] www.ic.nhs.uk/webfiles/publications/008_Screening/Breastscrn0910/Breast_Screening_Publication_2010_Report.pdf

These data allow the Quality Assurance Reference Centre to evaluate the quality of the Northern Ireland Breast Screening Programme. Performance is compared to the minimum standards and targets set out in NHSBSP Publication No. 60 (Version 2) *Consolidated Guidance on Standards for the NHS Breast Screening Programme* , *April 2005**. The standards are summarised in **Appendix 1**. It should be noted that these quality assurance data provide information on the performance of the four breast screening units and the programme as a whole: they do not provide information on individual performance.

Minimum standards: These figures represent the levels of performance which are the minimum acceptable for any breast screening unit. Where the minimum standard is shown "greater than or equal to", any level of performance below that standard should be investigated by the Quality Assurance team. Where the minimum standard is shown as "less than or equal to", any level of performance above that standard should be investigated similarly.

Targets: These are the quantitative targets that are considered to be achievable individually by one third of units within the NHSBSP. All units should aim to achieve targets. If the specified cancer detection rates etc are achieved, then the programme will be on target to replicate the mortality reduction achieved in trials.

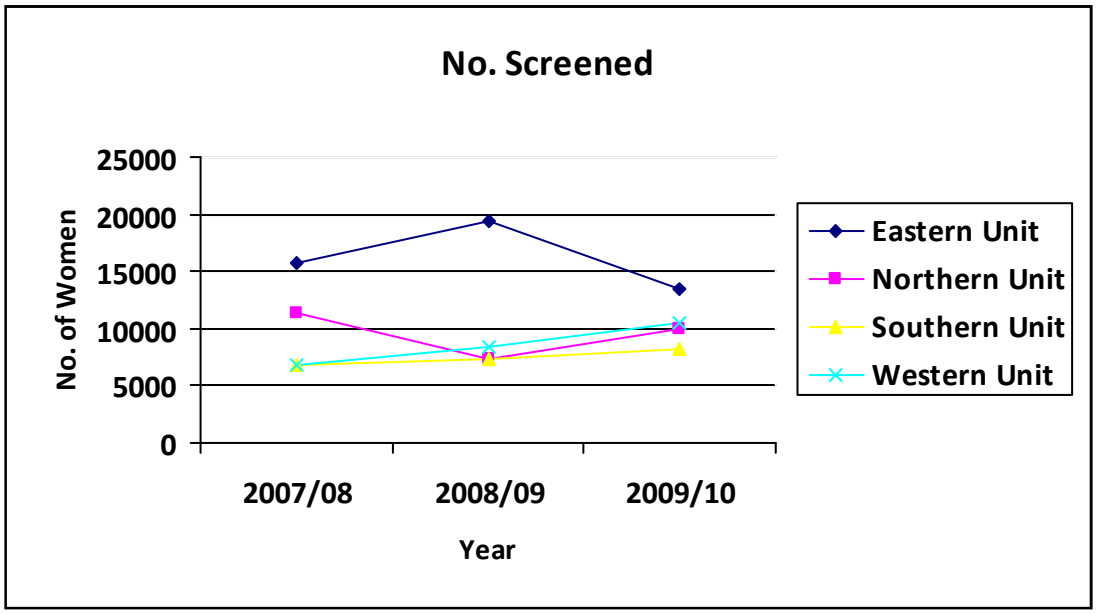
The KC 62 data for women aged 50 – 64 are shown in **Appendix 2**.
The KC 62 data for women aged 50 – 70 are shown in **Appendix 3**.

*www.cancerscreening.nhs.uk/breastscreen/publications/nhsbsp60v2.pdf

Number of Women Screened

A total of 71,773 women aged 50-70 were invited and 53,454 screened giving an uptake of 74% in 2009/10. Figure 1 illustrates how many women aged 50-64 were screened by each unit and in total over a three year period.

Figure 1: Number of women aged 50-64 (of invited) screened each year from 2007 – 2010

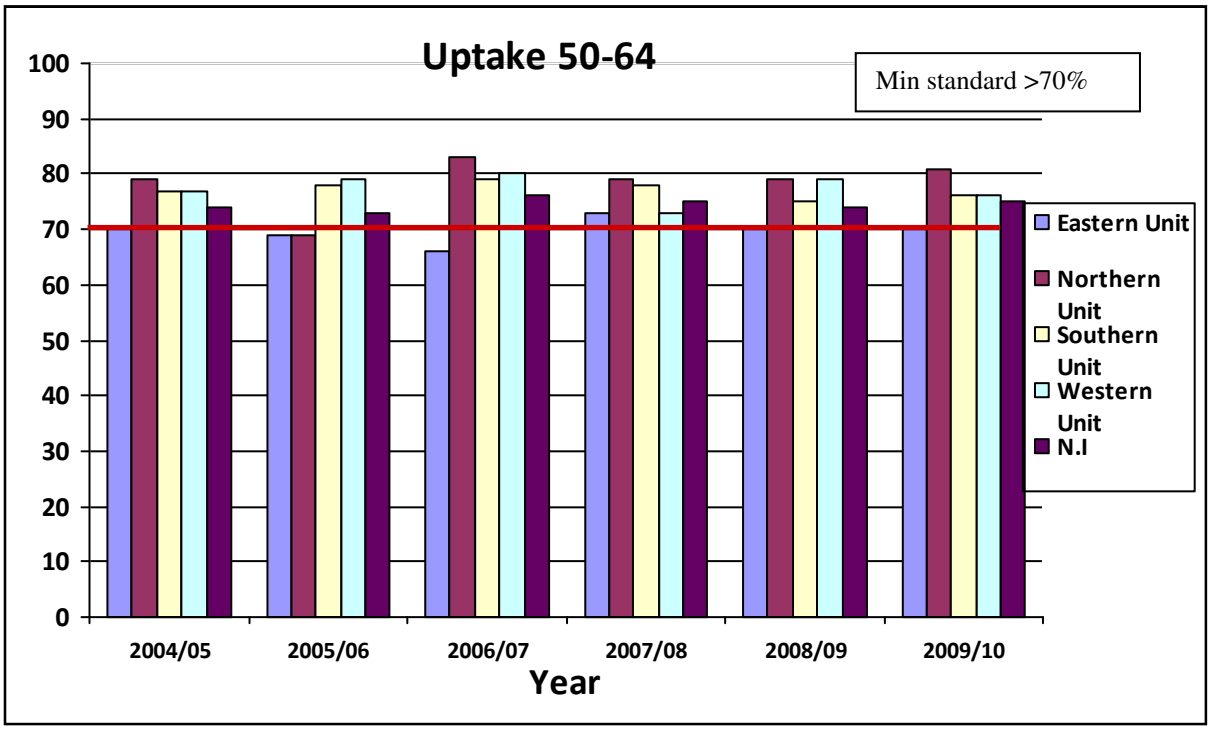


Uptake

Each year around quarter of women invited for breast screening do not take up the offer

Uptake measures the percentage of women who attend for breast screening each year, following an invitation. Figure 2 shows the up-take rates over a 6 year period. In 2009/10 each of the 4 breast screening units achieved an uptake of over 70% for women aged 50 - 64, which is the national minimum standard. The figure for Northern Ireland was 75.4%. This compares well with the English figure 73.4%

Figure 2: Uptake for women aged 50-64 by unit and for Northern Ireland



The uptake for women aged 50 – 70 in 2009/10 is shown in table 1. The overall uptake for this age range in Northern Ireland is also 74.4%. The uptake in the Eastern area is just below the standard.

Table1: Breast Screening Uptake in Women Aged 50 – 70 in 2009/10

Area	Uptake (%)
Northern Ireland	74.4
Eastern Unit	69.2
Northern Unit	80.8
Southern Unit	75.3
Western Unit	75.5
England	73.2

Non-attendance can be due to organisational and communication issues or individual factors. The PHA is currently looking at ways to ensure all eligible women can make an informed choice about attending for breast screening.

Screen to Routine Recall

96.6% of women (who had a normal test result) received their results within 2 weeks

Most women who attend for breast screening mammography will be identified as having normal mammograms. Screen to routine recall measures the interval between the date a woman attended for screening (the date her mammograms were taken) and the date her episode is closed on the NBSS (taken as a proxy for the date she is sent her results letter). The minimum standard is for ≥ 90% of women to receive their results within two weeks, with a target of 100%.

Figure 3 shows the overall results for Northern Ireland over a 3 year period. 96.6% of women received their results within 2 weeks. Performance against this standard has improved considerably over the past few years.

Figure 3: Screen to routine recall for Northern Ireland by year from 2007/08 to 2009/10

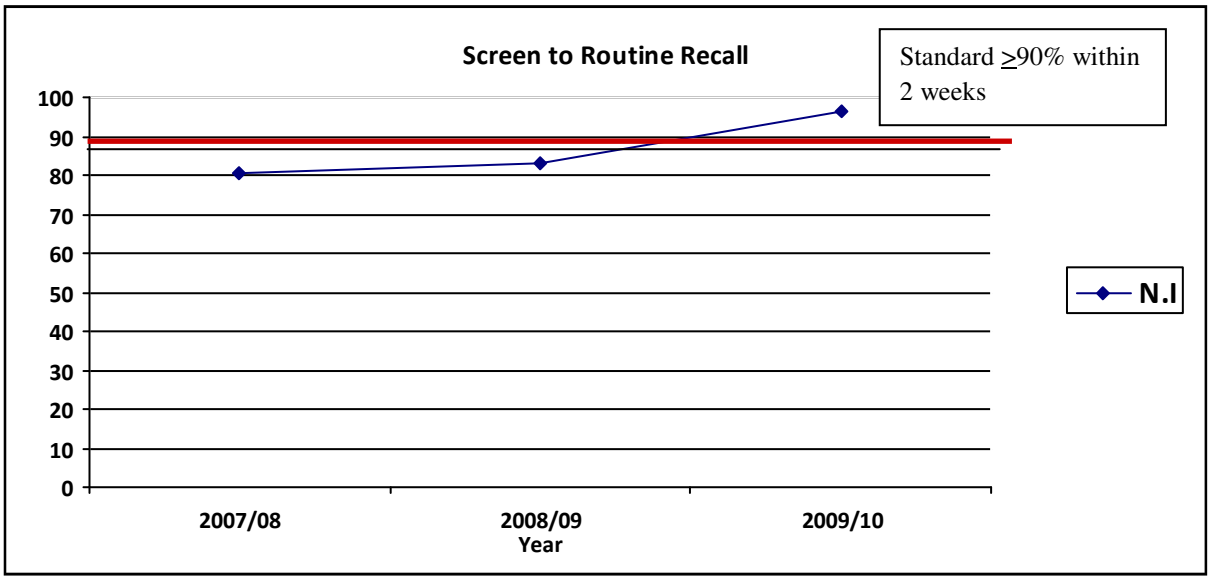
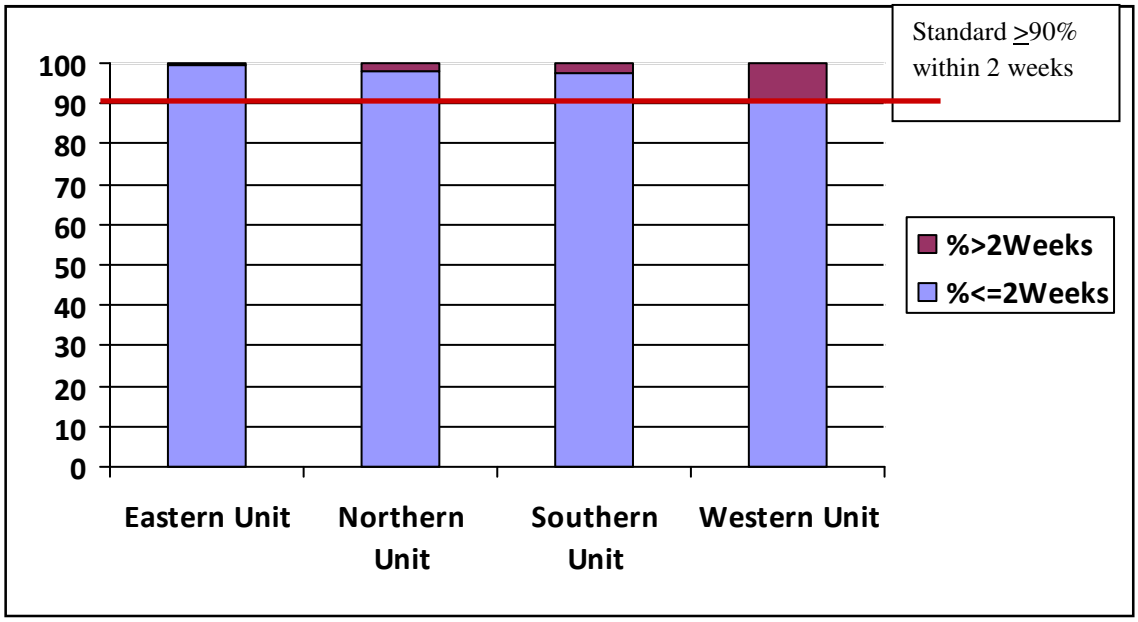


Figure 4 shows the performance of each unit in 2009/10.

Figure 4: Screen to routine recall by unit in 2009/10



Screen to Assessment

94.4% of women referred for assessment were offered an appointment within 3 weeks

Around 1 woman in 20 who attends for screening mammography is found to have an abnormality on her mammogram. These women are invited to attend an assessment clinic for further investigations. Most will not have breast cancer. Screen to assessment measures the interval between a woman's screening mammogram and the date she is first offered an appointment for assessment. The minimum standard is for ≥ 90% of women to be offered an appointment within 3 weeks of attendance for mammography, with a target of 100%.
Figure 5 shows the overall results for Northern Ireland over a 3 year period. Performance has improved considerably over the past 3 years; reaching 94.4% in 2009/10.

Figure 5: Screen to assessment for Northern Ireland by year from 2007/08 to 2009/10

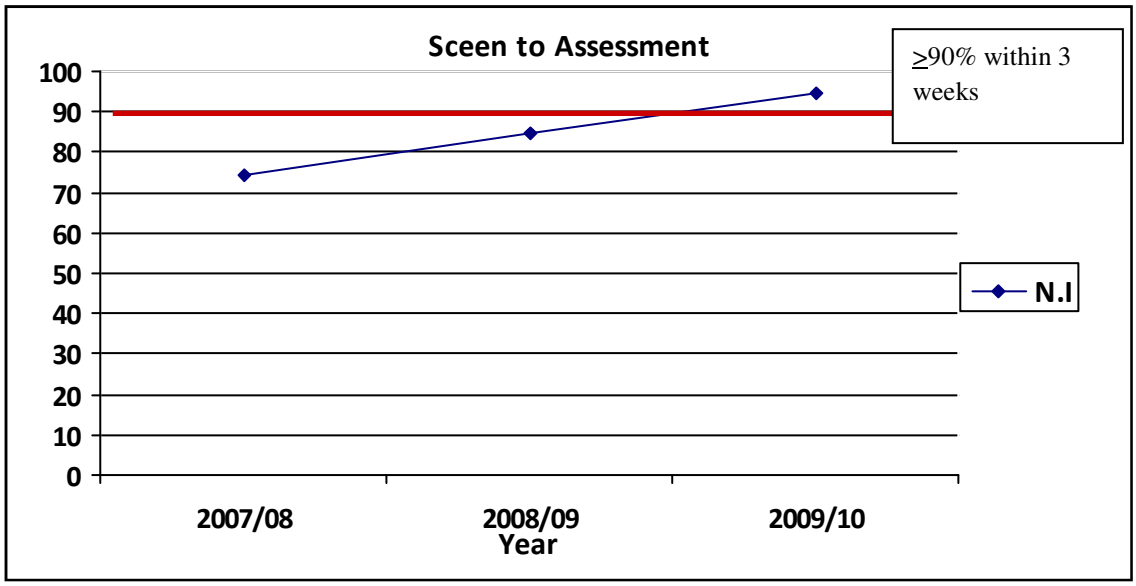
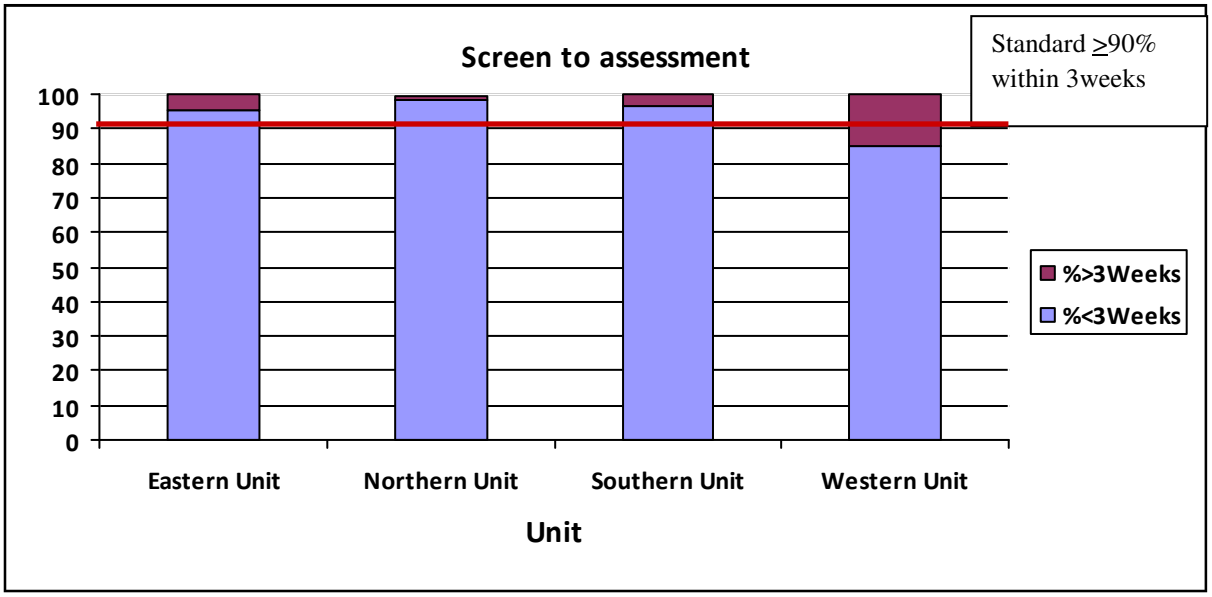


Figure 6 shows the performance by breast screening unit for 2009/10.

Figure 6: Screen to assessment by unit 2009/10



Referred for Assessment

2,004 women were referred for assessment in 2009/10 – 3.7% of the women screened

The percentage of women who are recalled to an assessment clinic is normally higher in those women who are attending for their first screening mammogram (known as the prevalent screen) than in those attending for subsequent screening mammography (know as incident screens). Table 2 shows the performance by unit. The objective is to minimise the number of women referred for further tests. However, a recall rate that is too low can reduce the number of cancers detected.

Prevalent screen

The minimum standard for the percentage of women recalled for assessment in the prevalent (first) screen is < 10%, with a target of < 7%. The Northern Ireland figure for the prevalent screen was **7.6%**, which meets the standard.

Incident screen

The minimum standard for the percentage of women recalled for assessment for incident (subsequent) screens is < 7%, with a target of < 5%. The Northern Ireland figure for incident screens was **2.5%**, which meets the standard (and exceeds the target).

Table 2: Percentage of women aged 50 – 70 referred for assessment by unit.

Area	Prevalent %	Incident %
Eastern	9.6	1.9
Northern	9.3	3.5
Southern	5.5	2.7
Western	5.4	2.1
Northern Ireland	7.6	2.5
	Standard < 10% Target < 7%	Standard < 7% Target < 5%

By age band

Table 3 shows the percentage of women who are returned to routine recall after screening; and the corresponding percentage sent for further investigation at an assessment clinic, split by age bands.

Table 3: Percentage of women invited aged 50–70 returned to routine recall & referred for assessment by age band

Age Group	No. Screened	Routine Recall (%)	Referred to Assessment (%)
<= 44	0	0 (0)	0 (0)
45 - 49	1299	1195 (92)	104 (8)
50 - 52	9708	9009 (93)	699 (7.2)
53 - 54	5671	5473 (97)	198 (3.5)
55 - 59	13606	13223 (97)	373 (2.7)
60 - 64	13138	12793 (97)	345 (2.6)
65 - 69	10441	10100 ()	341 (3.3)
70	890	842 (95)	48 (5.4)
71 - 74	15	13 (87)	2 (13.3)
>=75	1	1 (100)	0 (0)
Target Group (50-70)	53454	51450 (96)	2004 (3.7)
Total all ages	54769	52659 (96)	2110 (3.9)
Age group 50 - 64	42123	40508 (96)	1615 (3.8)

Visits to the Assessment Clinic

95% of women only required one visit to the assessment clinic to have a biopsy taken

The number of assessment clinic visits required to achieve a definitive diagnosis should be kept to a minimum, with no more than 2 for interventional procedures such as cytology and/or core biopsy. The table below shows how Northern Ireland compares with other parts of the UK.

Table 7 shows that 95% of women in Northern Ireland, who need fine needle aspiration cytology and/or a core biopsy, only require a single visit to the assessment clinic. This compares favourably with the UK average of 87%.

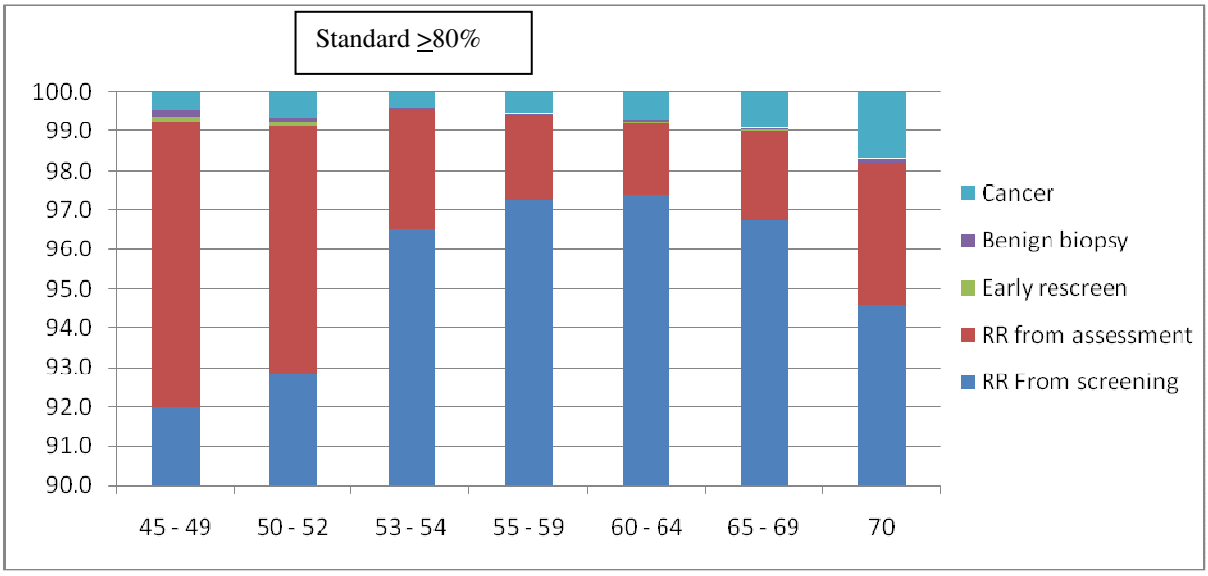
Table 7: Number of visits for cytology/core biopsy for all cancers UK data for 209/10

	0 (%)	1 (%)	2 (%)	3+ (%)	Total (%)	Repeat (2+) visit for core/cyt (%)
Eastern Unit	0 (0)	127 (99)	0 (0)	1 (1)	128 (100)	1 (1)
Northern Unit	0 (0)	75 (89)	9 (11)	0 (0)	84 (100)	9 (11)
Southern Unit	0 (0)	76 (87)	9 (10)	2 (2)	87 (100)	11 (13)
Western Unit	0 (0)	100 (100)	0 (0)	0 (0)	100 (100)	0 (0)
Northern Ireland	0 (0)	378 (95)	18 (5)	3 (1)	399 (100)	21 (5)
UK	10 (0)	14850 (87)	2021 (12)	132 (1)	17013 (100)	2153 (13)

Outcome of Screening

Younger women are more likely to be called back for assessment than older women but cancer is more likely to be found in older women

Figure 7 shows the outcome of screening by age bands. Younger women are more likely to be called back to an assessment clinic for further testing. The result of this further testing is, for most women, reassurance. These women are returned to routine recall and invited again for routine screening again in 3 year's time ("RR from assessment" on the graph). Note that the y-axis of the graph starts at 90%; as more than 90% of all women screened have normal mammograms. These women are returned to routine recall ie invited for routine screening again in 3 year's time ("RR from screening" on graph).



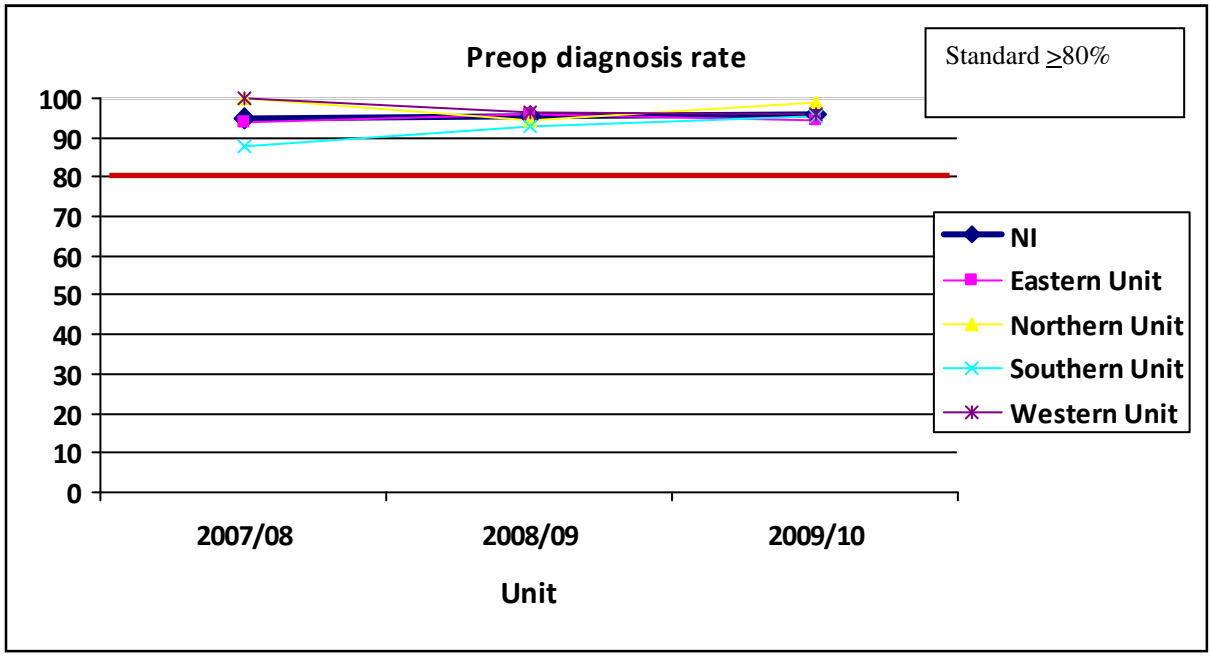
Early re-screen involves bringing a woman (who has attended an assessment clinic) back for screening mammography sooner than the normal three yearly screening interval. This is a rare event.

Preoperative Diagnosis Rate

95.9% of women with cancers detected by screening had the diagnosis confirmed before surgery

The pre-operative diagnosis rate measures the percentage of screen detected cancers where the diagnosis was established prior to surgery. Diagnosis before surgery is made by taking a biopsy at the assessment clinic (usually by core biopsy but increasingly by vacuum assisted biopsy). Some women have to have a surgical biopsy to establish the diagnosis. This can be because the diagnosis is difficult to establish. The minimum standard is ≥80% of cancers should be diagnosed before surgery, with a target of ≥90%.

Figure 8 shows each unit's performance over a 3 year period. The figure for women aged 50-70 in Northern Ireland was 95.9% in 2009/10. It has remained around 95% for a number of years. The figures for 2007/08 and 2008/09 relate to women aged 50 – 64, as this was before the programme was extended to automatically invite older women.



Pathology

The diagnostic accuracy of biopsies taken at assessment clinics is high

The breast biopsies taken at the assessment clinic are examined and categorised by a pathologist as:

B or C 1 – Normal
B or C 2 – Benign disease
B or C 3 – Uncertain malignant potential
B or C 4 – Suspicious
B or C 5 – Malignant

The letter B refers to core biopsy or mammotomy and C refers to fine needle aspiration cytology.

The assessment clinic biopsy results are subsequently compared with the definitive diagnosis of tissue removed during surgery (further histology). The table shows the results for Northern Ireland for 2009/10.

Table 4: Comparison of assessment clinic biopsy result with final diagnosis (further histology)

		Assessment clinic biopsy results					
		B or C5	B or C4	B or C3	B or C2	B or C1	Total
Further histology	**Malignant**	**372**	**3**	**11**	0	**1**	**387****
	Invasive	312	1	3	0	0	316
	Non-invasive	60	2	8	0	1	71
	Benign	3	3	28	2	0	36
	No Further Histology	**6***	4	18	448	66	542
	Total B or C Results	**381**	10	57	450	67	965

*These are considered to be cancers
**This figure differs from the total number of cancers (399) in the next section due to the way the pathology QA

Absolute sensitivity = 96.2%
This is the percentage of all the cancers diagnosed (387+6*) that were categorised as being malignant (B or C 5) on the assessment clinic biopsy biopsy (372+6*). As can be seen from the table some cancers were initially categorised as normal, uncertain or suspicious.

The minimum standard is >70% and the preferred standard is >80%.

Complete sensitivity = 99.7%
This is the percentage of all cancers diagnosed (387+6*) that were categorised as uncertain (B or C 3), suspicious (B or C 4) or malignant (B or C 5) (372+6*+3+11).

The minimum standard is >80 and the preferred standard is > 90.

Positive predictive value = 99.2%
This measures the likelihood of having a final diagnosis of cancer (372+6*) if the assessment clinic biopsy is categorised as malignant (B or C 5) (381).

The minimum standard is > 99 and the preferred standard is > 99.5.

Total Number of Cancers Detected

324 invasive cancers were detected in 2009/10 – of these 180 were less than 15 mm in diameter

A total of 399 cancers were detected in 2009/10. Of these 324 were invasive cancers and 75 were ductal carcinoma in situ (DCIS). A proportion of cases of DCIS will eventually become invasive (between 25% and 50%). However, it is not yet possible to identify which ones will and which won't. All women diagnosed with this disease are therefore offered treatment (surgery with or without radiotherapy).
Of the 324 invasive cancers 180 (55%) were under 15 mm in diameter compared to the England figure of 52%

Invasive Cancer Detection Rate

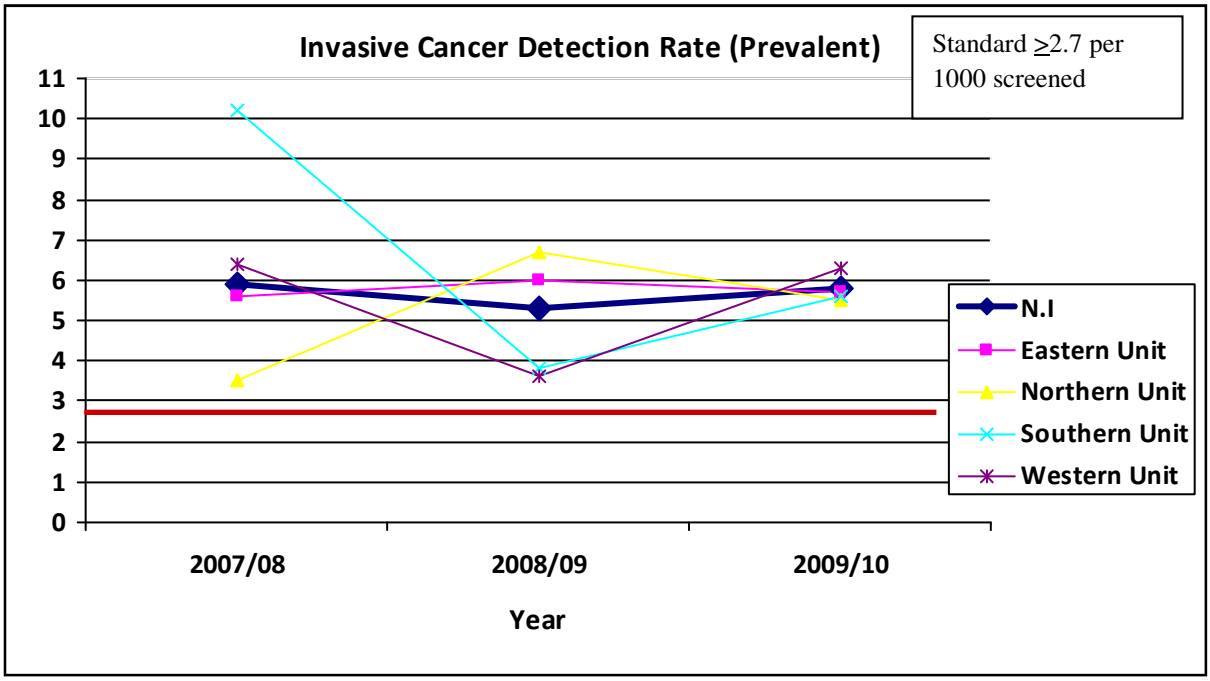
5.8 per 1,000 women screened for the first time (aged under 53) were diagnosed with an invasive breast cancer. The figure for women attending for subsequent screening tests was 4.8 per 1,000

This measures the number of invasive cancers detected per 1,000 eligible women who were invited and screened.

Prevalent Screen

The minimum national standard for the invasive cancer detection rate is ≥2.7 per 1,000 women for the prevalent (first) screen; with a target rate of ≥3.6 per 1,000.
Figure 9 shows that each of the units exceeded the target figure for the prevalent (first) screen. The rate for Northern Ireland was 5.8 per 1,000 women screened for the first time. The comparative English rate was 5.4 per 1,000 in 2008/09.

Figure 9: Invasive cancer detection rates (prevalent screen) by unit & for Northern Ireland 2007-2010



Incident Screen

The minimum national standard for the invasive cancer detection rate is ≥ 3.0 per 1,000 women for incident (subsequent) screens; with a target of ≥ 4.0 per 1,000.

Figure 10 shows that each of the units either met or exceeded the target for women aged 50-64. The figure for Northern Ireland was 4.5 which is lower than last year (5.9) but exceeds the target.

Figure 10: Invasive cancer detection rates (incident screen) for women aged 50-64 by unit & for Northern Ireland 2007-2010

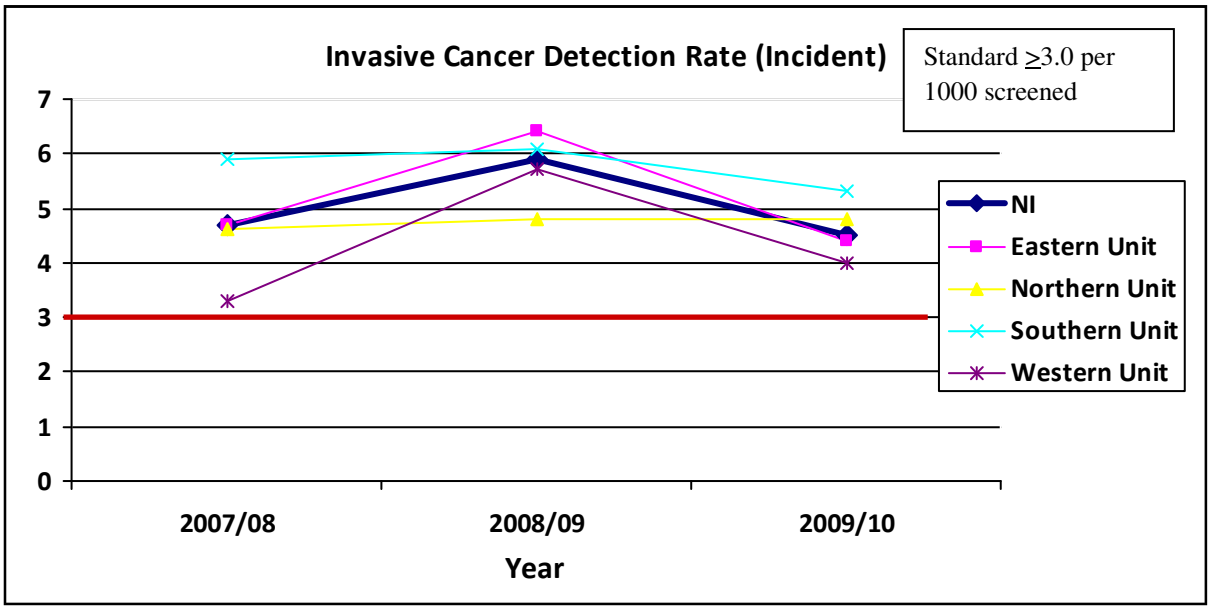


Table 4 shows the invasive cancer detection rates for the incident (subsequent) screens for women age 50-70 in 2009/10.

Table 4: Invasive cancer detection rates (incident) by area for women age 50-70 in 2009/10

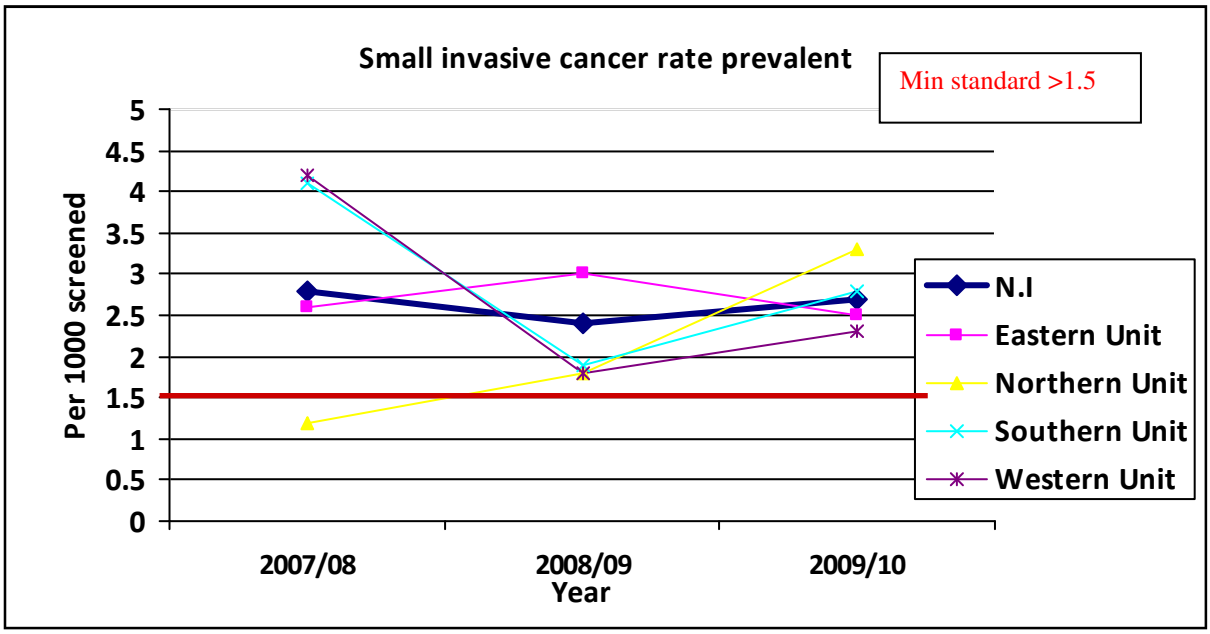
Area	Invasive Cancers per 1,000 women screened	
Eastern Unit	4.7	Minimum standard ≥ 3.0 Target ≥ 4.0
Northern Unit	5.1	
Southern Unit	5.4	
Western Unit	4.2	
Northern Ireland	4.8	
England	6.3	

Small Invasive Cancers

2.7 per 1,000 women screened for the first time (aged under 53) had a small invasive cancer. The figure for women attending for subsequent screening tests was 2.9 per 1,000

The main aim of breast screening is to detect small invasive breast cancers at a time in their natural history when treatment is more likely to reduce the risk of death from the disease. Small cancers are defined as being less than 15 mm in their maximum diameter.

Figure 11 shows the small invasive cancer detection rates for the prevalent (first) screen over a three year period. The Northern Ireland programme as a whole exceeded the minimum standard (> 1.5 per 1,000 women screened) and the target figure of ≥2.00 per 1,000. Rates for the individual units tend to fluctuate from year to year due to small numbers.



The small invasive cancer rate for the incident (subsequent) screens is shown in figure 12. Again the Northern Ireland programme as a whole has exceeded the minimum standard (> 1.65 per 1,000) and the target of ≥ 2.2 per 1,000 women screened.

Figure 12: Small invasive cancer detection rates (incident screen) for women aged 50-64 by unit & for Northern Ireland 2007 -2010

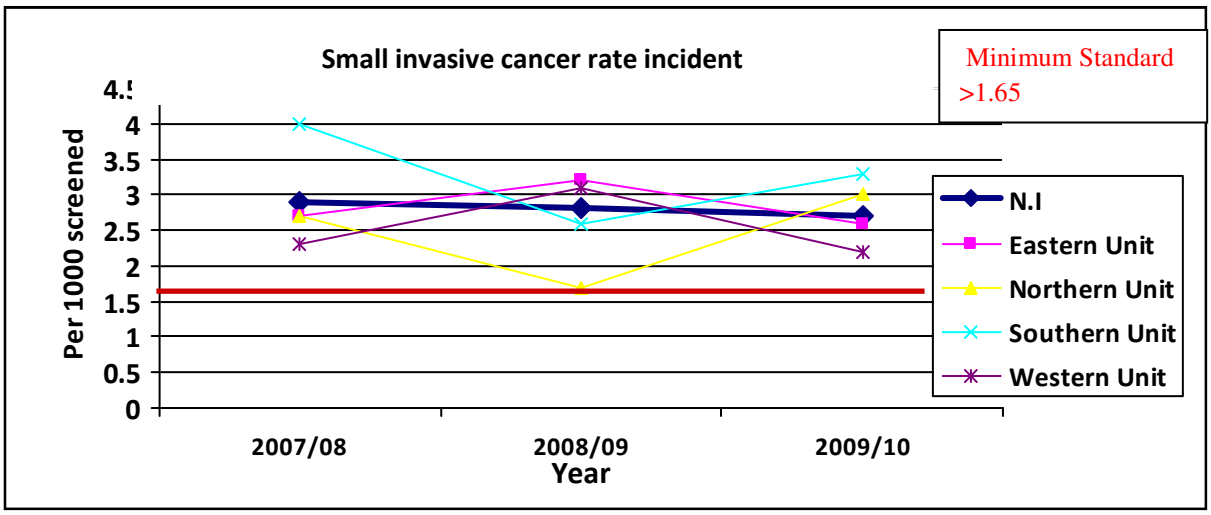


Table 5 shows the small invasive cancer detection rates for the incident (subsequent) screens for women age 50-70 in 2009/10.

Table 5: Small invasive cancer detection rates (incident) by area for women age 50-70 in 2009/10

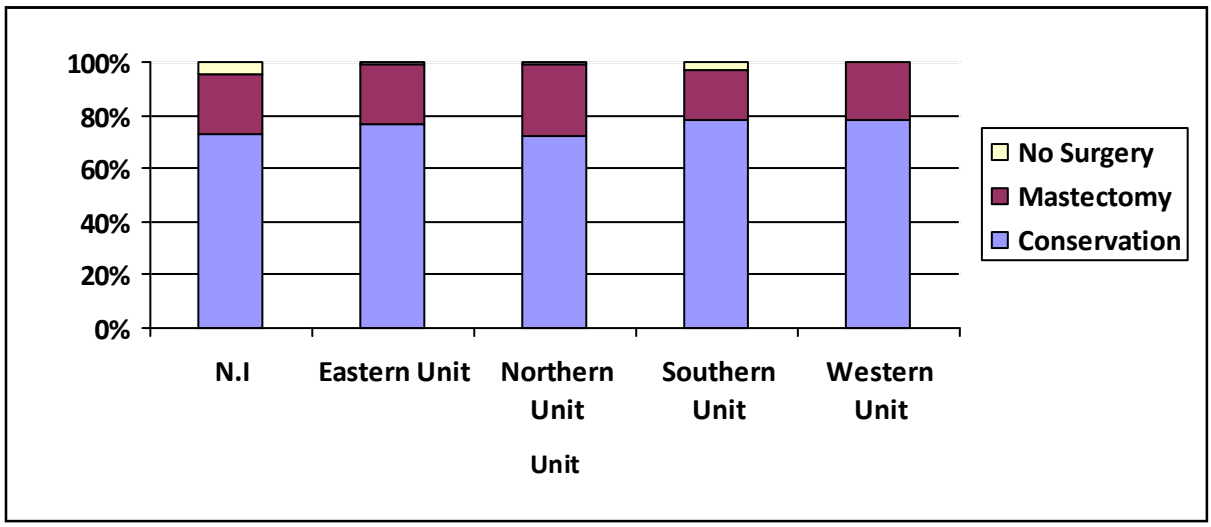
Area	Small Invasive Cancers per 1,000 women screened	
Eastern Unit	2.7	Minimum standard > 1.65 Target ≥ 2.2
Northern Unit	3.2	
Southern Unit	3.5	
Western Unit	2.5	
Northern Ireland	2.9	
England	3.2	

Treatment of Invasive Cancers

76.2% of women diagnosed with an invasive cancer had breast conserving surgery

Of the 324 invasive cancers detected by the Northern Ireland Breast Screening Programme in 2009/10, 247 (76.2%) were treated using breast conservation surgery while 73 (22.5%) were treated by mastectomy (5 had no surgery). This can be due to patient choice or because the patient is too unwell for surgery. Figure 13 shows the percentages by screening unit.

Figure 13: Treatment of invasive cancers by unit and for Northern Ireland



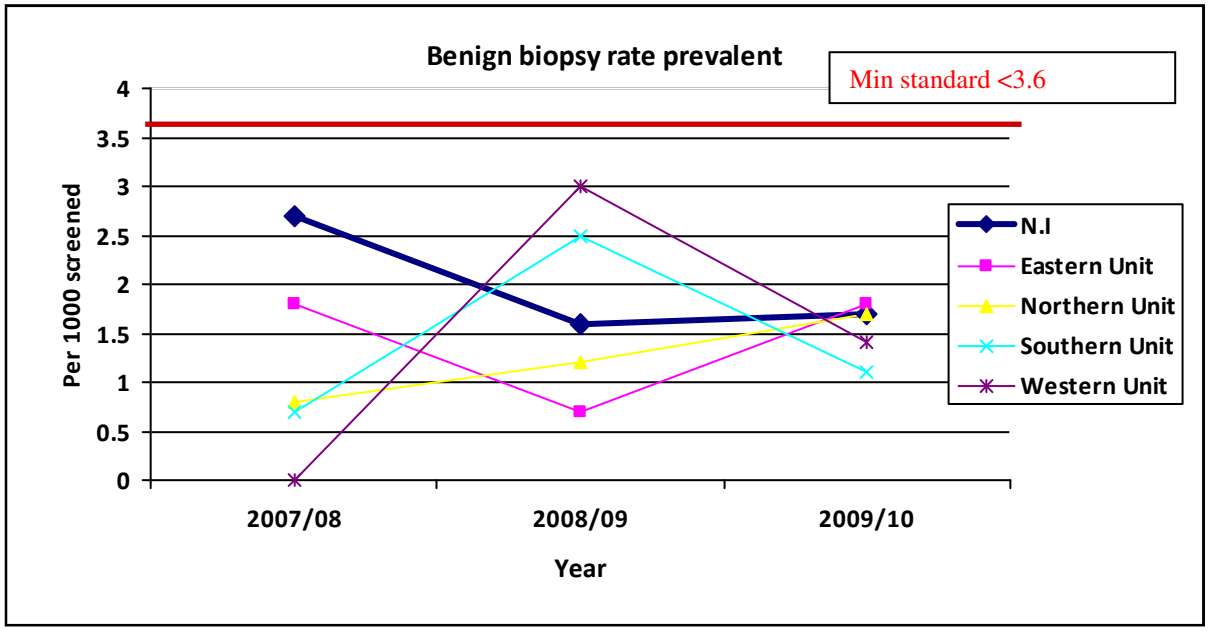
Figures for the same year, for the whole of the UK, show that 74% of women underwent conservation surgery and 24% had a mastectomy (2% had no surgery).

Benign Biopsy Rates

The proportion of women who had a surgical operation for what turned out to be benign disease was 1.5 per 1000 screened for the prevalent (first) screen and 0.3 for incident (subsequent)

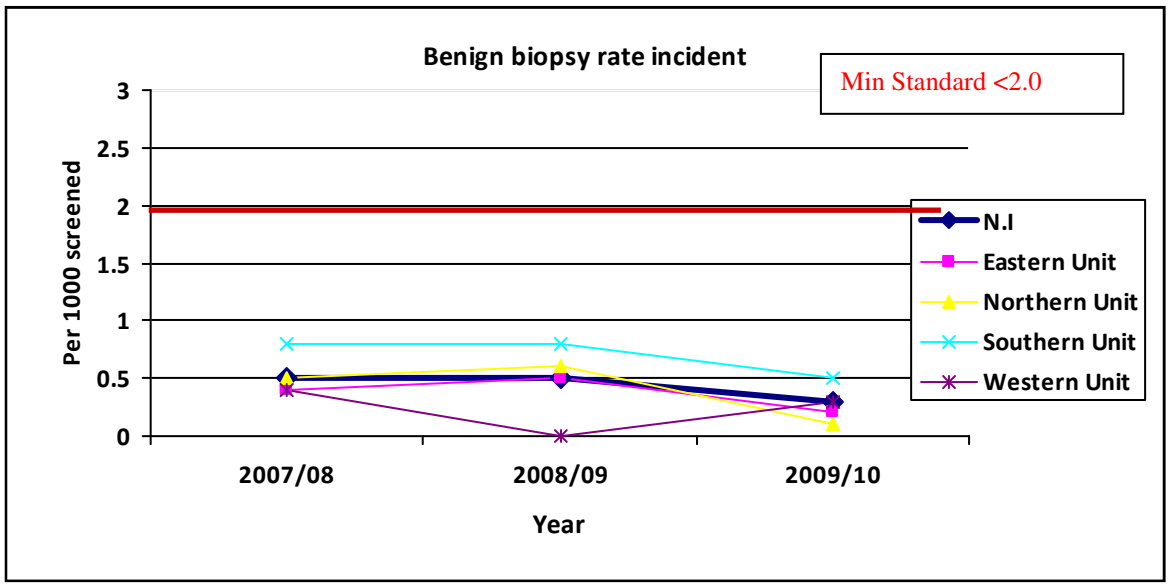
This is a measure of the number of women per 1,000 women screened who had surgery for benign breast disease. The aim is to keep the rate as low as possible although with some lesions, eg fibroadenoma, the patient may choose to have surgery to remove a lump even though it has been diagnosed as benign at the assessment clinic. In addition radial scars (a star shaped thickening of breast tissue which shows up on mammograms) are removed due to their association with tubular carcinoma of the breast; even though they are intrinsically benign.
The benign biopsy rates for the prevalent (first) and incident (subsequent) screening rounds over a three year period are shown in figures 14 and 15. For the prevalent screen each of the units meets the minimum standard (< 3.6 per 1,000) and all meet the target figure of < 1.8

Figure 14: Benign biopsy rate for the prevalent (first screen) 2005/06-2009/10



For the incident screen each of the units meets the minimum standard (< 2.0 per 1,000) and all meet the target figure of < 1.0.

Figure 15: Benign biopsy rate for the incident (subsequent screens) 2005/06-2009/10 in women aged 50 - 64



The table below shows the benign biopsy rates for the incident (subsequent) screens for women age 50-70 in 2009/10.

Table 6: Benign biopsy rates for incident screens in women aged 50 – 70 by unit and for Northern Ireland in 2009/10

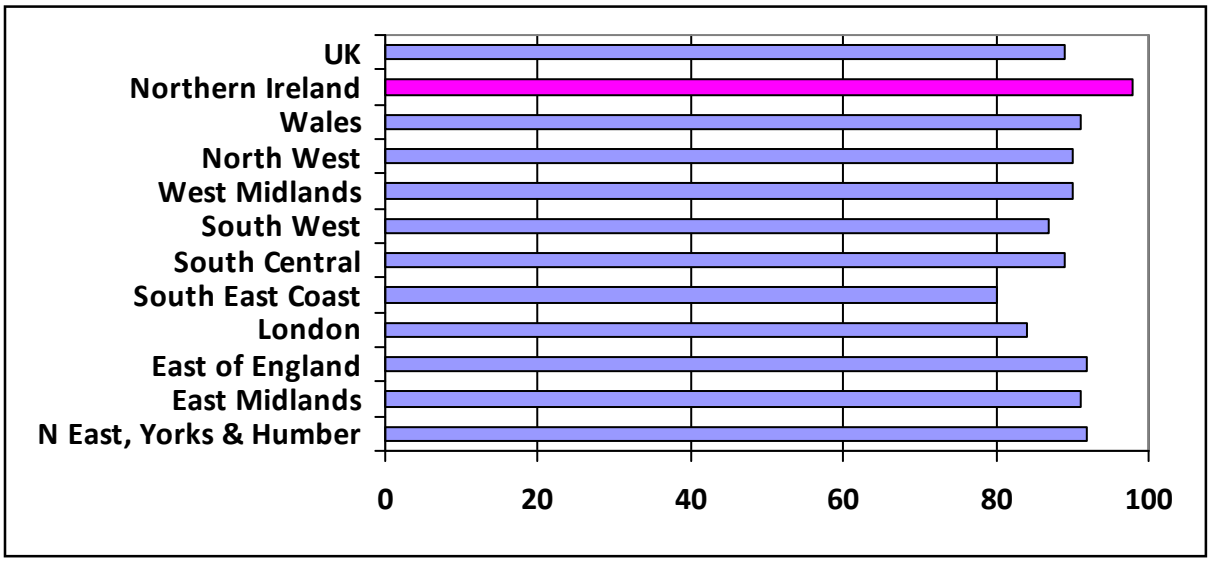
Area	Benign biopsy rate incident	
Eastern	0.3	Minimum standard <2.0 Target <1.0
Northern	0.1	
Southern	0.4	
Western	0.2	
Northern Ireland	0.3	
England	0.5	

Waiting Times for Surgery

The waiting times for surgery are the lowest in the UK

If surgery is the primary treatment, then patients should be offered a date of surgery within 62 days of the date of referral. 100% of patients should be admitted for operation within 62 days of the date of referral. In order to monitor performance against the 62 day standards, the 'date of last read' of the screening mammogram recorded on NBSS has been taken as the 'date of referral'
Figures 16 shows the waiting times for surgery in different areas of the UK.

Figure 16: Waiting times date of last read to first therapeutic surgery by region 2009/10 % waiting <62 days



Repeat Surgical Operations

23% of women with invasive cancer required a repeat surgical operation. In addition 28% of women with non or micro-invasive cancers needed repeat surgery

Most women diagnosed with breast cancer by the Northern Ireland Screening Programme require a single surgical operation to remove the disease. Some women need repeat surgery eg to ensure complete removal of the cancer following the initial pathology report. However, the objective is to minimise the number of therapeutic operations.
The table 8 below shows that the reoperation rate for women with invasive cancer was 23% in Northern Ireland. This compares favourably with other parts of the UK and is just below the UK average figure of 24%. The reoperation rate for women with non or micro-invasive cancers is 28% and equals the average figure for the UK.

Table 8: Repeat operations of surgically treated invasive and non/micro-invasive cancers

	Invasive			Non/micro invasive		
	Total	Re-op	%	Total	Re-op	%
Eastern Unit	106	23	22	20	5	25
Northern Unit	67	19	28	16	5	31
Southern Unit	71	18	25	14	5	36
Western Unit	76	14	18	24	6	25
Northern Ireland	320	74	23	74	21	28
UK	13429	3183	24	3295	935	28

Screening Round Length

95.8% of women were offered an appointment for mammography screening within 36 months of their previous normal screen

The screening round length is the interval between each offered invitation for screening mammography. The NHS Breast Screening Guidance states that, to ensure women are recalled for screening at appropriate intervals, the percentage of eligible women whose first offered appointment is within 36 months of their previous screen should be 90% or more.

Measurement of screening round length provides an indicator of the efficiency with which a screening programme is managed. The long-term effectiveness of the programme is dependent on women in the target age group continuing to be screened at regular intervals. Figure 18 shows the percentage of women screened within 36 months and within 38 months.

Figure 18: Screening round length by quarter for Northern Ireland 2009/10

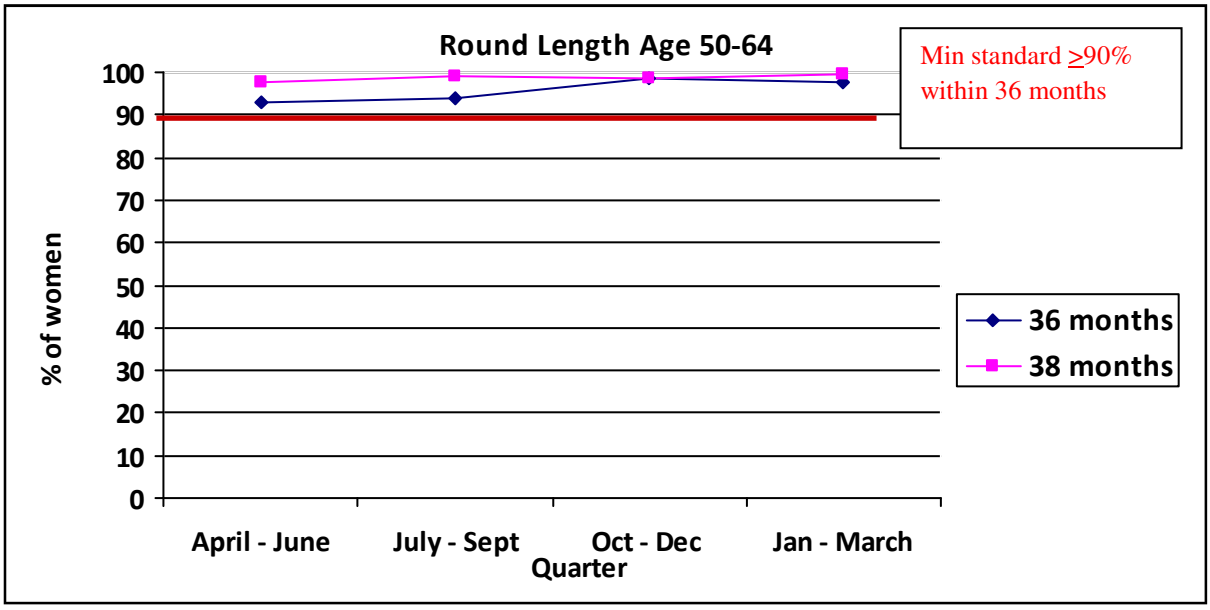


Figure 19 shows the Northern Ireland round length over a three year period.

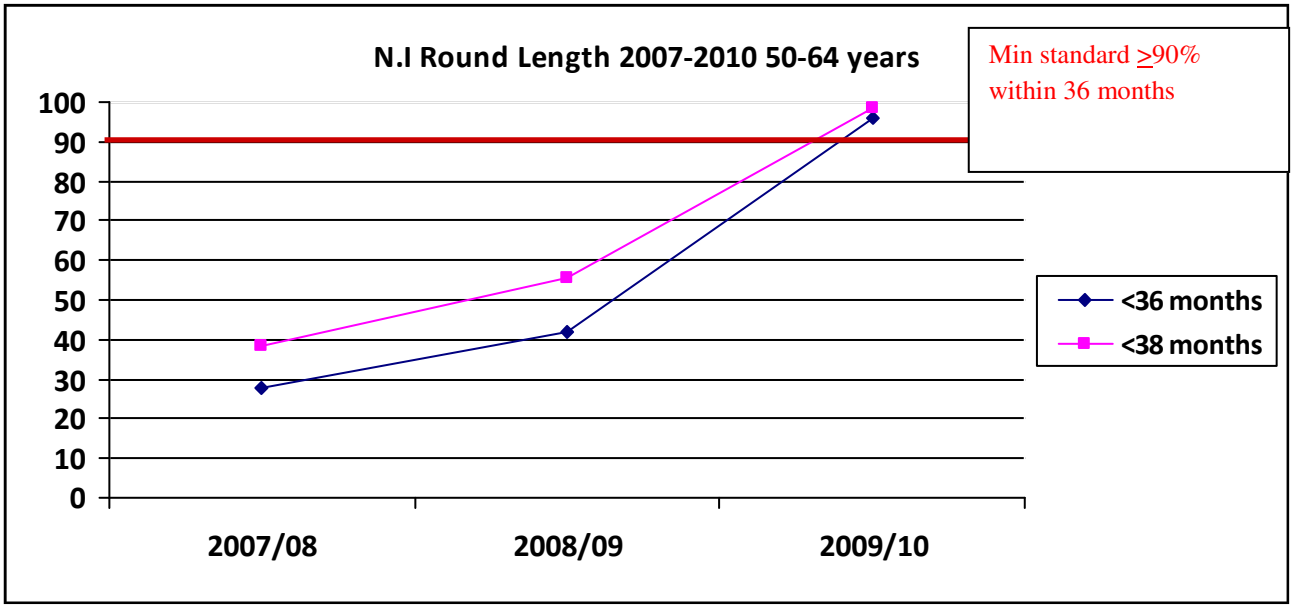
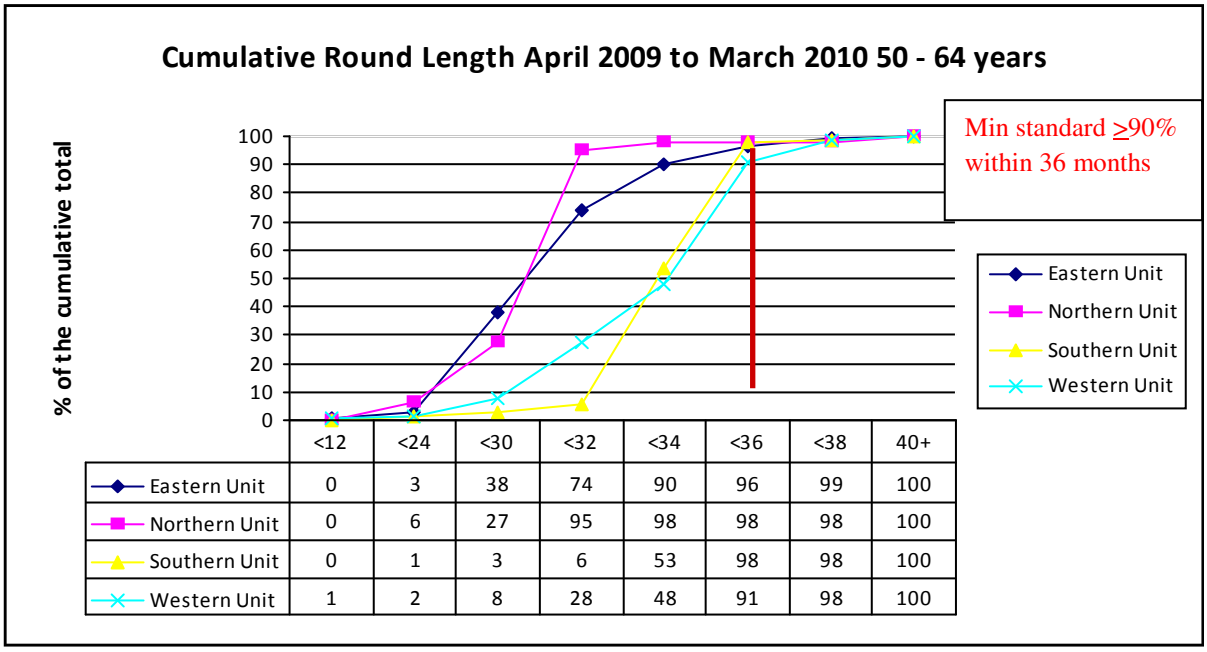


Figure 20 shows the cumulative round length figures for April 2009 to March 20010 by breast screening unit



	<12	<24	<30	<32	<34	<36	<38	40+
Eastern Unit	0	3	38	74	90	96	99	100
Northern Unit	0	6	27	95	98	98	98	100
Southern Unit	0	1	3	6	53	98	98	100
Western Unit	1	2	8	28	48	91	98	100

Consolidated Guidance on Standards for the NHS Breast Screening Programme 50-64

Summary of KC62 source tables and age groups to be used in the calculation of standards (50–64)

Objective	Criteria	Calculation	Minimum standard	Target
1. To maximise the number of eligible women who attend for screening*†	The percentage of eligible women who attend for screening	Tables: A, B, C1, C2 Age: 50–64	≥ 70% of invited women to attend for screening	80%
2. To maximise the number of cancers detected*†	(a) The rate of invasive cancers detected in eligible women invited and screened	Table: A Age: 50–52	Prevalent screen ≥ 2.7 per 1000	Prevalent screen ≥ 3.6 per 1000
		Table: C1 Age: 53–64	Incident screen ≥ 3.0 per 1000	Incident screen ≥ 4.2 per 1000
	(b) The rate of cancers detected which are in situ carcinoma	Table: A Age: 50–52	Prevalent screen ≥ 0.4 per 1000 to ≤ 0.9 per 1000	
		Table: C1 Age: 53–64	Incident screen ≥ 0.5 per 1000 to ≤ 1.0 per 1000	
	(c) SDR	Tables: A and B Age: 50–64	Prevalent screen ≥ 0.75	Prevalent screen ≥ 1.0
		Table: C1 Age: 50–64	Incident screen ≥ 0.75	Incident screen ≥ 1.0
		Tables: A, B, C1 Age: 50–64	Overall ≥ 0.75	Overall ≥ 1.0
3. To maximise the number of small invasive cancers detected*	The rate of invasive cancers less than 15 mm in diameter detected in eligible women invited and screened	Table: A Age: 50–52	Prevalent screen ≥ 1.5 per 1000	Prevalent screen ≥ 2.0 per 1000
		Table: C1 Age: 53–64	Incident screen ≥ 1.6 per 1000	Incident screen ≥ 2.2 per 1000
7. To minimise the number of women screened who are referred for further tests*†‡	(a) The percentage of women who are referred for assessment	Table: A Age: 50–52	Prevalent screen < 10%	Prevalent screen < 7%
		Table: C1 Age: 53–64	Incident screen < 7%	Incident screen < 5%
	(b) The percentage of women screened who are placed on short-term recall	Table: T Age: 50–64	< 1.0%	≤ 0.25%
8. To ensure that the majority of cancers, both palpable and impalpable, receive a nonoperative tissue diagnosis of cancer*	The percentage of women who have a non-operative diagnosis of cancer by cytology or needle histology after a maximum of two visits	Table: T Age: 50–64	≥ 80%	≥ 90%
9. To minimise the number of unnecessary operative procedures	The rate of benign biopsies	Table: A Age: 50–52	Prevalent screen < 3.6 per 1000	Prevalent screen < 1.8 per 1000
		Table: C1 Age: 53–64	Incident screen < 2.0 per 1000	Incident screen < 1.0 per 1000

Summary of KC62 source tables and age groups to be used in the calculation of standards (50–70)				
Objective	Criteria	Calculation	Minimum standard	Target
1. To maximise the number of eligible women who attend for screening*†	The percentage of eligible women who attend for screening	Tables: A, B, C1, C2 Age: 50–70	≥ 70% of invited women to attend for screening	80%
2. To maximise the number of cancers detected*†	(a) The rate of invasive cancers detected in eligible women invited and screened	Table: A Age: 50–52	Prevalent screen ≥ 2.7 per 1000	Prevalent screen ≥ 3.6 per 1000
		Table: C1 Age: 53–70	Incident screen ≥ 3.1 per 1000	Incident screen ≥ 4.2 per 1000
	(b) The rate of cancers detected which are in situ carcinoma	Table: A Age: 50–52	Prevalent screen ≥ 0.4 per 1000	
		Table: C1 Age: 53–70	Incident screen ≥ 0.5 per 1000	
	(c) SDR	Tables: A and B Age: 50–70	Prevalent screen ≥ 0.85	Prevalent screen ≥ 1.0
		Table: C1 Age: 50–70	Incident screen ≥ 0.85	Incident screen ≥ 1.0
		Tables: A, B, C1 Age: 50–70	Overall ≥ 0.85	Overall ≥ 1.0
3. To maximise the number of small invasive cancers detected*	The rate of invasive cancers less than 15 mm in diameter detected in eligible women invited and screened	Table: A Age: 50–52	Prevalent screen ≥ 1.5 per 1000	Prevalent screen ≥ 2.0 per 1000
		Table: C1 Age: 53–70	Incident screen ≥ 1.7 per 1000	Incident screen ≥ 2.3 per 1000
7. To minimise the number of women screened who are referred for further tests*†‡	(a) The percentage of women who are referred for assessment	Table: A Age: 50–52	Prevalent screen < 10%	Prevalent screen < 7%
		Table: C1 Age: 53–70	Incident screen < 7%	Incident screen < 5%
	(b) The percentage of women screened who are placed on short-term recall	Table: T Age: 50–70	< 0.5%	≤ 0.25%
8. To ensure that the majority of cancers, both palpable and impalpable, receive a nonoperative tissue diagnosis of cancer*	The percentage of women who have a non-operative diagnosis of cancer by cytology or needle histology after a maximum of two visits	Table: T Age: 50–70	≥ 80%	≥ 90%
9. To minimise the number of unnecessary operative procedures	The rate of benign biopsies	Table: A Age: 50–52	Prevalent screen < 3.6 per 1000	Prevalent screen < 1.8 per 1000
		Table: C1 Age: 53–70	Incident screen < 2.0 per 1000	Incident screen < 1.0 per 1000

APPENDIX 2

KC 62 Data 2009/10 for women aged 50-64

Northern Ireland Breast Screening Service

KC62 Data 2009 - 2010

Activity Data		Invited	Screened	Assessed	Early Recall	Benign	Total Cancers	DCIS	Inv. Ca	Inv. Ca < 15mm
All Ages	Prevalent (A&B)	22467	12058	916	14	17	93	19	74	35
	Incident (C1&C2)	51147	42711	1194	12	13	289	54	235	137
	Early recalls	44	42	40	1	1	4	2	2	1
	Self/GP referrals	0	1636	77	3	1	13	0	13	7
	Total	**73658**	**56447**	**2227**	**30**	**32**	**399**	**75**	**324**	**180**
50-64	Prevalent (A:50-52 only)	11651	8613	654	9	13	65	15	50	23
	Incident (C1:53-64 only)	32716	29030	731	5	8	162	30	132	79
	Early recalls	36	34	33	1	1	2	1	1	0
	Self/GP referrals	0	732	41	2	0	6	0	6	5
	Total	**44403**	**38409**	**1459**	**17**	**22**	**235**	**46**	**189**	**107**

Performance against National Standards					National Standards	
Routine Screen Women aged 50 - 64		2007/08	2008/09	2009/10	Minimum	Target
Uptake %	Prevalent (A)	74.6	73.1	73.9	>70%	80%
	Incident (C1)	88.3	88.0	88.7		
	Overall (A-C2)	75.6	73.9	75.4		
Technical recall/repeats%	Overall	3.0	2.1	2.0	<3%	<2%
Recall to Assessment %	Prevalent	8.3	8.2	7.6	<10%	<7%
	Incident	2.8	2.8	2.5	<7%	<5%
Early Recall %	Overall	0.02	0.08	0.04	<1%	≤0.25%
Benign open biopsy rate per 1000 women	Prevalent	1.0	1.5	1.5	<3.6	<1.8
	Incident	0.5	0.5	0.3	<2.0	<1.0
DCIS per 1000 women screened	Prevalent	2.7	1.6	1.7	≥0.4	NA
	Incident	1.5	1.4	1.0	≥0.5	NA
Invasive cancers per 1000 women screened	Prevalent	5.9	5.3	5.8	≥2.7	≥3.6
	Incident	4.7	5.9	4.5	≥3.0	≥4.0
Invasive cancers <15mm per 1000 women screened	Prevalent	2.8	2.4	2.7	>1.5	≥2.0
	Incident	2.9	2.8	2.7	>1.65	≥2.2
Pre-operative diagnosis rate %	Overall	94.9	95.3	95.6	≥80%	≥90%
Standardised Detection Ratios Invasive cancers (annual - all sizes)	Prevalent	1.47	1.33	1.53	≥1.00	≥1.4
	Incident	1.17	1.47	1.13		
	Overall	1.26	1.43	1.24		
Standardised Detection Ratios Invasive cancers < 15mm (3 yr average)	Overall	1.26	1.23	1.24	≥0.75	≥1.0
Rolling three year Standardised Detection Ratios Invasive cancers (all sizes)	Prevalent	1.37	1.42	1.45	≥0.75	≥1.0
	Incident	1.27	1.31	1.25		
	Overall	1.30	1.34	1.31		
Round Length ≤ 36 months	Overall	27.9	41.8	95.8	≥90% first offered appts within 36 months	100%
≤ 38 months	Overall	38.5	55.8	98.7		
Screening to Results - (Date of screen)		80.3	83.2	96.6	≥90% within 2 weeks	100%
Screening to Assessment (DoFOA)		74.5	84.7	94.4	≥90% within 3 weeks	100%

Belfast Unit

KC62 Data 2009 - 2010

Activity Data		Invited	Screened	Assessed	Early Recall	Benign	Total Cancers	DCIS	Inv. Ca	Inv. Ca < 15mm
All Ages	Prevalent (A&B)	8481	3969	354	10	7	31	5	26	15
	Incident (C1&C2)	16846	13556	305	7	4	86	14	72	40
	Early recalls	28	26	26	0	1	3	2	1	0
	Self/GP referrals	0	674	37	2	0	8	0	8	4
	Total	**25355**	**18225**	**722**	**19**	**12**	**128**	**21**	**107**	**59**
50-64	Prevalent (A:50-52 only)	4057	2796	268	7	5	20	4	16	7
	Incident (C1:53-64 only)	10297	8939	169	1	2	49	10	39	23
	Early recalls	24	22	22	0	1	2	1	1	0
	Self/GP referrals	0	302	23	1	0	4	0	4	3
	Total	**14378**	**12059**	**482**	**9**	**8**	**75**	**15**	**60**	**33**

Performance against National Standards					National Standards	
Routine Screen Women aged 50 - 64		2007/08	2008/09	2009/10	Minimum	Target
Uptake %	Prevalent (A)	72.5	69.9	68.9	>70%	80%
	Incident (C1)	86.9	85.9	86.8		
	Overall (A-C2)	73.1	69.6	70.4		
Technical recall/repeats%	Overall	4.9	2.7	2.7	<3%	<2%
Recall to Assessment %	Prevalent	9.1	8.3	9.6	<10%	<7%
	Incident	2.7	2.3	1.9	<7%	<5%
Early Recall %	Overall	0.05	0.14	0.07	<1%	≤0.25%
Benign open biopsy rate per 1000 women	Prevalent	1.8	0.7	1.8	<3.6	<1.8
	Incident	0.4	0.5	0.2	<2.0	<1.0
DCIS per 1000 women screened	Prevalent	3.2	1.4	1.4	≥0.4	NA
	Incident	1.4	1.1	1.1	≥0.5	NA
Invasive cancers per 1000 women screened	Prevalent	5.6	6	5.7	≥2.7	≥3.6
	Incident	4.7	6.4	4.4	≥3.0	≥4.0
Invasive cancers <15mm per 1000 women screened	Prevalent	2.6	3	2.5	>1.5	≥2.0
	Incident	2.7	3.2	2.6	>1.65	≥2.2
Pre-operative diagnosis rate %	Overall	93.3	96	93.5	≥80%	≥90%
Standardised Detection Ratios Invasive cancers (annual - all sizes)	Prevalent	1.43	1.48	1.70	≥1.00	≥1.4
	Incident	1.17	1.58	1.05		
	Overall	1.26	1.55	1.23		
Standardised Detection Ratios Invasive cancers < 15mm (3 yr average)	Overall	1.54	1.3	1.29	≥0.75	≥1.0
Rolling three year Standardised Detection Ratios Invasive cancers (all sizes)	Prevalent	1.53	1.64	1.53	≥0.75	≥1.0
	Incident	1.21	1.37	1.29		
	Overall	1.31	1.45	1.37		
Round Length ≤ 36 months	Overall	27.9	13.9	96.3	≥90% first offered appts within 36 months	100%
≤ 38 months	Overall	38.5	35.6	99.3		
Screening to Results - (Date of screen)		94.5	98.9	99.3	≥90% within 2 weeks	100%
Screening to Assessment (DoFOA)		74.4	86.5	95.3	≥90% within 3 weeks	100%

Northern Unit

KC62 Data 2009 - 2010

Activity Data		Invited	Screened	Assessed	Early Recall	Benign	Total Cancers	DCIS	Inv. Ca	Inv. Ca < 15mm
All Ages	Prevalent (A&B)	4256	2651	256	2	5	17	4	13	7
	Incident (C1&C2)	12110	10557	387	0	2	67	12	55	35
	Early recalls	0	0	0	0	0	0	0	0	0
	Self/GP referrals	0	179	8	0	0	0	0	0	0
	Total	**16366**	**13387**	**651**	**2**	**7**	**84**	**16**	**68**	**42**
50-64	Prevalent (A:50-52 only)	2259	1816	168	1	3	13	3	10	6
	Incident (C1:53-64 only)	7814	7112	249	0	1	37	3	34	21
	Early recalls	0	0	0	0	0	0	0	0	0
	Self/GP referrals	0	51	2	0	0	0	0	0	0
	Total	**10073**	**8979**	**419**	**1**	**4**	**50**	**6**	**44**	**27**

Performance against National Standards					National Standards	
Routine Screen Women aged 50 - 64		2007/08	2008/09	2009/10	Minimum	Target
Uptake %	Prevalent (A)	79.4	77.7	80.4	>70%	80%
	Incident (C1)	89.4	91	91.0		
	Overall (A-C2)	78.8	79.3	81.5		
Technical recall/repeats%	Overall	3.10	2.06	1.8	<3%	<2%
Recall to Assessment %	Prevalent	9.3	13.7	9.3	<10%	<7%
	Incident	3.3	5	3.5	<7%	<5%
Early Recall %	Overall	0.02	0	0.01	<1%	≤0.25%
Benign open biopsy rate per 1000 women	Prevalent	0.80	1.20	1.7	<3.6	<1.8
	Incident	0.5	0.6	0.1	<2.0	<1.0
DCIS per 1000 women screened	Prevalent	2.4	1.8	1.7	≥0.4	NA
	Incident	2	0.8	0.4	≥0.5	NA
Invasive cancers per 1000 women screened	Prevalent	3.5	6.7	5.5	≥2.7	≥3.6
	Incident	4.6	4.8	4.8	≥3.0	≥4.0
Invasive cancers <15mm per 1000 women screened	Prevalent	1.2	1.8	3.3	>1.5	≥2.0
	Incident	2.7	1.7	3.0	>1.65	≥2.2
Pre-operative diagnosis rate %	Overall	100	94.3	98.2	≥80%	≥90%
Standardised Detection Ratios Invasive cancers (annual - all sizes)	Prevalent	1.04	1.41	1.20	≥1.00	≥1.4
	Incident	1.15	1.19	1.19		
	Overall	1.11	1.26	1.20		
Standardised Detection Ratios Invasive cancers < 15mm (3 yr average)	Overall	1.19	0.83	1.07	≥0.75	≥1.0
Rolling three year Standardised Detection Ratios Invasive cancers (all sizes)	Prevalent	1.24	1.14	1.18	≥0.75	≥1.0
	Incident	1.27	1.06	1.18		
	Overall	1.26	1.09	1.18		
Round Length ≤ 36 months	Overall	7.2	21.1	98.1	≥90% first offered appts within 36 months	100%
≤ 38 months	Overall	7.4	21.7	98.2		
Screening to Results		86	96.8	98.2	≥90% within 2 weeks	100%
Screening to Assessment		71.6	90.8	98.3	≥90% within 3 weeks	100%

Southern Unit

KC62 Data 2009 - 2010

Activity Data		Invited	Screened	Assessed	Early Recall	Benign	Total Cancers	DCIS	Inv. Ca	Inv. Ca < 15mm
All Ages	Prevalent (A&B)	4481	2490	142	1	2	18	3	15	5
	Incident (C1&C2)	9652	8123	238	4	4	65	11	54	32
	Early recalls	10	10	8	0	0	0	0	0	0
	Self/GP referrals	0	362	19	0	1	4	0	4	2
	Total	**14143**	**10985**	**407**	**5**	**7**	**87**	**14**	**73**	**39**
50-64	Prevalent (A:50-52 only)	2358	1790	99	0	2	13	3	10	5
	Incident (C1:53-64 only)	6412	5684	155	4	3	34	4	30	19
	Early recalls	8	8	7	0	0	0	0	0	0
	Self/GP referrals	0	154	8	0	0	2	0	2	2
	Total	**8778**	**7636**	**269**	**4**	**5**	**49**	**7**	**42**	**26**

Performance against National Standards					National Standards	
Routine Screen Women aged 50 - 64		2007/08	2008/09	2009/10	Minimum	Target
Uptake %	Prevalent (A)	77.8	74.4	75.9	>70%	80%
	Incident (C1)	90.6	88.5	88.6		
	Overall (A-C2)	78.3	75.6	76.2		
Technical recall/repeats%	Overall	1.7	1.8	1.9	<3%	<2%
Recall to Assessment %	Prevalent	7.5	6.2	5.5	<10%	<7%
	Incident	3.3	3.1	2.7	<7%	<5%
Early Recall %	Overall	0.06	0.03	0.05	<1%	≤0.25%
Benign open biopsy rate per 1000 women	Prevalent	0.7	2.5	1.1	<3.6	<1.8
	Incident	0.8	0.8	0.5	<2.0	<1.0
DCIS per 1000 women screened	Prevalent	4.7	2.5	1.7	≥0.4	NA
	Incident	1.5	2	0.7	≥0.5	NA
Invasive cancers per 1000 women screened	Prevalent	10.2	3.8	5.6	≥2.7	≥3.6
	Incident	5.9	6.1	5.3	≥3.0	≥4.0
Invasive cancers <15mm per 1000 women screened	Prevalent	4.1	1.9	2.8	>1.5	≥2.0
	Incident	4.0	2.6	3.3	>1.65	≥2.2
Pre-operative diagnosis rate %	Overall	87.9	92.9	96.5	≥80%	≥90%
Standardised Detection Ratios Invasive cancers (annual - all sizes)	Prevalent	2.50	1.2	1.49	≥1.00	≥1.4
	Incident	1.46	1.51	1.39		
	Overall	1.75	1.43	1.42		
Standardised Detection Ratios Invasive cancers < 15mm (3 yr average)	Overall	1.63	1.51	1.42	≥0.75	≥1.0
Rolling three year Standardised Detection Ratios Invasive cancers (all sizes)	Prevalent	1.49	1.55	1.71	≥0.75	≥1.0
	Incident	1.42	1.56	1.44		
	Overall	1.44	1.56	1.51		
Round Length ≤ 36 months	Overall	53.2	91.1	98.2	≥90% first offered appts within 36 months	100%
≤ 38 months	Overall	81.3	98.2	98.5		
Screening to Results - (Date of screen)		96.7	95.4	97.6	≥90% within 2 weeks	100%
Screening to Assessment (DoFOA)		73.8	91.7	96.7	≥90% within 3 weeks	100%

Western Unit

KC62 Data 2009 - 2010

Activity Data		Invited	Screened	Assessed	Early Recall	Benign	Total Cancers	DCIS	Inv. Ca	Inv. Ca < 15mm
All Ages	Prevalent (A&B)	5249	2948	164	1	3	27	7	20	8
	Incident (C1&C2)	12539	10475	264	1	3	71	17	54	30
	Early recalls	6	6	6	1	0	1	0	1	1
	Self/GP referrals	0	421	13	1	0	1	0	1	1
	Total	**17794**	**13850**	**447**	**4**	**6**	**100**	**24**	**76**	**40**
50-64	Prevalent (A:50-52 only)	2977	2211	119	1	3	19	5	14	5
	Incident (C1:53-64 only)	8193	7295	158	0	2	42	13	29	16
	Early recalls	4	4	4	1	0	0	0	0	0
	Self/GP referrals	0	225	8	1	0	0	0	0	0
	Total	**11174**	**9735**	**289**	**3**	**5**	**61**	**18**	**43**	**21**

Performance against National Standards					National Standards	
Routine Screen Women aged 50 - 64		**2007/08**	**2008/09**	**2009/10**	**Minimum**	**Target**
Uptake %	Prevalent (A)	71.9	76.6	74.3	>70%	80%
	Incident (C1)	87.3	90.1	89.0		
	Overall (A-C2)	73.7	79.2	76.4		
Technical recall/repeats%	Overall	0.3	1.1	1.3	<3%	<2%
Recall to Assessment %	Prevalent	5.3	4.2	5.4	<10%	<7%
	Incident	1.7	1.9	2.2	<7%	<5%
Early Recall %	Overall	0.10	0.04	0.01	<1%	≤0.25%
Benign open biopsy rate per 1000 women	Prevalent	0.0	3.0	1.4	<3.6	<1.8
	Incident	0.4	0.0	0.3	<2.0	<1.0
DCIS per 1000 women screened	Prevalent	0.0	1.2	2.3	≥0.4	NA
	Incident	1.0	1.8	1.8	≥0.5	NA
Invasive cancers per 1000 women screened	Prevalent	6.4	3.6	6.3	≥2.7	≥3.6
	Incident	3.3	5.7	4.0	≥3.0	≥4.0
Invasive cancers <15mm per 1000 women screened	Prevalent	4.2	1.8	2.3	>1.5	≥2.0
	Incident	2.3	3.1	2.2	>1.65	≥2.2
Pre-operative diagnosis rate %	Overall	100.0	96.6	95.5	≥80%	≥90%
Standardised Detection Ratios Invasive cancers (annual - all sizes)	Prevalent	1.47	0.89	1.64	≥1.00	≥1.4
	Incident	0.88	1.39	0.98		
	Overall	1.04	1.27	1.15		
Standardised Detection Ratios Invasive cancers < 15mm (3 yr average)	Overall	0.94	1.23	1.16	≥0.75	≥1.0
Rolling three year Standardised Detection Ratios Invasive cancers (all sizes)	Prevalent	1.07	1.16	1.36	≥0.75	≥1.0
	Incident	1.07	1.22	1.10		
	Overall	1.07	1.21	1.16		
Round Length ≤ 36 months	Overall	81.8	80.0	91.1	≥90% first offered appts within 36 months	100%
≤ 38 months	Overall	90.9	92.8	98.4		
Screening to Results - (Date of screen)		23.0	30.4	90.6	≥90% within 2 weeks	100%
Screening to Assessment (DoFOA)		84.0	55.0	85.0	≥90% within 3 weeks	100%

APPENDIX 3

KC 62 Data 2009/10 for women aged 50-70

Northern Ireland Breast Screening Service

KC62 Data 2009 - 2010

Activity Data		Invited	Screened	Assessed	Early Recall	Benign	Total Cancers	DCIS	Inv. Ca	Inv. Ca < 15mm
All Ages	Prevalent (A&B)	22467	12058	916	14	17	93	19	74	35
	Incident (C1&C2)	51147	42711	1194	12	13	289	54	235	137
	Early recalls	44	42	40	1	1	4	2	2	1
	Self/GP referrals	0	1636	77	3	1	13	0	13	7
	Total	**73658**	**56447**	**2227**	**30**	**32**	**399**	**75**	**324**	**180**
50-70	Prevalent (A:50-52 only)	11651	8613	654	9	13	65	15	50	23
	Incident (C1:53-70 only)	40437	35843	902	9	9	212	40	172	104
	Early recalls	43	41	40	1	1	4	2	2	1
	Self/GP referrals	0	1201	61	3	1	11	0	11	7
	Total	**52131**	**45698**	**1657**	**22**	**24**	**292**	**57**	**235**	**135**

Performance against National Standards					National Standards	
Routine Screen Women aged 50 - 70		2007/08	2008/09	2009/10	Minimum	Target
Uptake %	Prevalent (A)			73.9	>70%	80%
	Incident (C1)			88.6		
	Overall (A-C2)			74.8		
Technical recall/repeats%	Overall			2.0	<3%	<2%
Recall to Assessment %	Prevalent			7.6	<10%	<7%
	Incident			2.5	<7%	<5%
Early Recall %	Overall			0.04	<1%	≤0.25%
Benign open biopsy rate per 1000 women	Prevalent			1.5	<3.6	<1.8
	Incident			0.3	<2.0	<1.0
DCIS per 1000 women screened	Prevalent			1.7	≥0.4	NA
	Incident			1.1	≥0.5	NA
Invasive cancers per 1000 women screened	Prevalent			5.8	≥2.7	≥3.6
	Incident			4.8	≥3.0	≥4.0
Invasive cancers <15mm per 1000 women screened	Prevalent			2.7	>1.5	≥2.0
	Incident			2.9	>1.65	≥2.2
Pre-operative diagnosis rate %	Overall			95.9	≥80%	≥90%
Standardised Detection Ratios Invasive cancers (annual - all sizes)	Prevalent			1.50	≥1.00	≥1.4
	Incident			1.17		
	Overall			1.24		
Standardised Detection Ratios Invasive cancers < 15mm (3 yr average)	Overall			1.26	≥0.75	≥1.0
Rolling three year Standardised Detection Ratios Invasive cancers (all sizes)	Prevalent			1.44	≥0.75	≥1.0
	Incident			1.26		
	Overall			1.31		
Round Length ≤ 36 months	Overall			85.3	≥90% first offered appts within 36 months	100%
≤ 38 months	Overall			88.1		
Screening to Results - (Date of screen)				96.6	≥90% within 2 weeks	100%
Screening to Assessment (DoFOA)				94.4	≥90% within 3 weeks	100%

Belfast Unit

KC62 Data 2009 - 2010

Activity Data		Invited	Screened	Assessed	Early Recall	Benign	Total Cancers	DCIS	Inv. Ca	Inv. Ca < 15mm
All Ages	Prevalent (A&B)	8481	3969	354	10	7	31	5	26	15
	Incident (C1&C2)	16846	13556	305	7	4	86	14	72	40
	Early recalls	28	26	26	0	1	3	2	1	0
	Self/GP referrals	0	674	37	2	0	8	0	8	4
	Total	**25355**	**18225**	**722**	**19**	**12**	**128**	**21**	**107**	**59**
50-70	Prevalent (A:50-52 only)	4057	2796	268	7	5	20	4	16	7
	Incident (C1:53-70 only)	12566	10897	208	4	3	61	10	51	29
	Early recalls	28	26	26	0	1	3	2	1	0
	Self/GP referrals	0	506	29	2	0	6	0	6	4
	Total	**16651**	**14225**	**531**	**13**	**9**	**90**	**16**	**74**	**40**

Performance against National Standards					National Standards	
Routine Screen Women aged 50 - 70		2007/08	2008/09	2009/10	Minimum	Target
Uptake %	Prevalent (A)			68.9	>70%	80%
	Incident (C1)			86.7		
	Overall (A-C2)			69.2		
Technical recall/repeats%	Overall			2.7	<3%	<2%
Recall to Assessment %	Prevalent			9.6	<10%	<7%
	Incident			1.9	<7%	<5%
Early Recall %	Overall			0.08	<1%	≤0.25%
Benign open biopsy rate per 1000 women	Prevalent			1.8	<3.6	<1.8
	Incident			0.3	<2.0	<1.0
DCIS per 1000 women screened	Prevalent			1.4	≥0.4	NA
	Incident			0.9	≥0.5	NA
Invasive cancers per 1000 women screened	Prevalent			5.7	≥2.7	≥3.6
	Incident			4.7	≥3.0	≥4.0
Invasive cancers <15mm per 1000 women screened	Prevalent			2.5	>1.5	≥2.0
	Incident			2.7	>1.65	≥2.2
Pre-operative diagnosis rate %	Overall			94.4	≥80%	≥90%
Standardised Detection Ratios Invasive cancers (annual - all sizes)	Prevalent			1.67	≥1.00	≥1.4
	Incident			1.11		
	Overall			1.25		
Standardised Detection Ratios Invasive cancers < 15mm (3 yr average)	Overall			1.30	≥0.75	≥1.0
Rolling three year Standardised Detection Ratios Invasive cancers (all sizes)	Prevalent			1.52	≥0.75	≥1.0
	Incident			1.29		
	Overall			1.36		
Round Length ≤ 36 months	Overall			83.9	≥90% first offered appts within 36 months	100%
≤ 38 months	Overall			86.8		
Screening to Results - (Date of screen)				99.3	≥90% within 2 weeks	100%
Screening to Assessment (DoFOA)				95.3	≥90% within 3 weeks	100%

Northern Unit

KC62 Data 2009 - 2010

Activity Data		Invited	Screened	Assessed	Early Recall	Benign	Total Cancers	DCIS	Inv. Ca	Inv. Ca < 15mm
All Ages	Prevalent (A&B)	4256	2651	256	2	5	17	4	13	7
	Incident (C1&C2)	12110	10557	387	0	2	67	12	55	35
	Early recalls	0	0	0	0	0	0	0	0	0
	Self/GP referrals	0	179	8	0	0	0	0	0	0
	Total	**16366**	**13387**	**651**	**2**	**7**	**84**	**16**	**68**	**42**
50-70	Prevalent (A:50-52 only)	2259	1816	168	1	3	13	3	10	6
	Incident (C1:53-70 only)	10005	9089	319	0	1	53	7	46	29
	Early recalls	0	0	0	0	0	0	0	0	0
	Self/GP referrals	0	90	4	0	0	0	0	0	0
	Total	**12264**	**10995**	**491**	**1**	**4**	**66**	**10**	**56**	**35**

Performance against National Standards						National Standards	
Routine Screen Women aged 50 - 70		2007/08	2008/09	2009/10		Minimum	Target
Uptake %	Prevalent (A)			80.4		>70%	80%
	Incident (C1)			90.8			
	Overall (A-C2)			80.8			
Technical recall/repeats%	Overall			1.8		<3%	<2%
Recall to Assessment %	Prevalent			9.3		<10%	<7%
	Incident			3.5		<7%	<5%
Early Recall %	Overall			0.01		<1%	≤0.25%
Benign open biopsy rate per 1000 women	Prevalent			1.7		<3.6	<1.8
	Incident			0.1		<2.0	<1.0
DCIS per 1000 women screened	Prevalent			1.7		≥0.4	NA
	Incident			0.8		≥0.5	NA
Invasive cancers per 1000 women screened	Prevalent			5.5		≥2.7	≥3.6
	Incident			5.1		≥3.0	≥4.0
Invasive cancers <15mm per 1000 women screened	Prevalent			3.3		>1.5	≥2.0
	Incident			3.2		>1.65	≥2.2
Pre-operative diagnosis rate %	Overall			98.8		≥80%	≥90%
Standardised Detection Ratios Invasive cancers (annual - all sizes)	Prevalent			1.15		≥1.00	≥1.4
	Incident			1.23			
	Overall			1.21			
Standardised Detection Ratios Invasive cancers < 15mm (3 yr average)	Overall			1.11		≥0.75	≥1.0
Rolling three year Standardised Detection Ratios Invasive cancers (all sizes)	Prevalent			1.16		≥0.75	≥1.0
	Incident			1.21			
	Overall			1.19			
Round Length ≤ 36 months	Overall			89.2		≥90% first offered appts within 36 months	100%
≤ 38 months	Overall			89.3			
Screening to Results				98.2		≥90% within 2 weeks	100%
Screening to Assessment				98.3		≥90% within 3 weeks	100%

Southern Unit

KC62 Data 2009 - 2010

Activity Data		Invited	Screened	Assessed	Early Recall	Benign	Total Cancers	DCIS	Inv. Ca	Inv. Ca < 15mm
All Ages	Prevalent (A&B)	4481	2490	142	1	2	18	3	15	5
	Incident (C1&C2)	9652	8123	238	4	4	65	11	54	32
	Early recalls	10	10	8	0	0	0	0	0	0
	Self/GP referrals	0	362	19	0	1	4	0	4	2
	Total	**14143**	**10985**	**407**	**5**	**7**	**87**	**14**	**73**	**39**
50-70	Prevalent (A:50-52 only)	2358	1790	99	0	2	13	3	10	5
	Incident (C1:53-70 only)	7764	6890	184	4	3	46	9	37	24
	Early recalls	9	9	8	0	0	0	0	0	0
	Self/GP referrals	0	286	17	0	1	4	0	4	2
	Total	**10131**	**8975**	**308**	**4**	**6**	**63**	**12**	**51**	**31**

Performance against National Standards					National Standards	
Routine Screen Women aged 50 - 70		2007/08	2008/09	2009/10	Minimum	Target
Uptake %	Prevalent (A)			75.9	>70%	80%
	Incident (C1)			88.7		
	Overall (A-C2)			75.3		
Technical recall/repeats%	Overall			1.9	<3%	<2%
Recall to Assessment %	Prevalent			5.5	<10%	<7%
	Incident			2.7	<7%	<5%
Early Recall %	Overall			0.05	<1%	≤0.25%
Benign open biopsy rate per 1000 women	Prevalent			1.1	<3.6	<1.8
	Incident			0.4	<2.0	<1.0
DCIS per 1000 women screened	Prevalent			1.7	≥0.4	NA
	Incident			1.3	≥0.5	NA
Invasive cancers per 1000 women screened	Prevalent			5.6	≥2.7	≥3.6
	Incident			5.4	≥3.0	≥4.0
Invasive cancers <15mm per 1000 women screened	Prevalent			2.8	>1.5	≥2.0
	Incident			3.5	>1.65	≥2.2
Pre-operative diagnosis rate %	Overall			95.3	≥80%	≥90%
Standardised Detection Ratios Invasive cancers (annual - all sizes)	Prevalent			1.52	≥1.00	≥1.4
	Incident			1.37		
	Overall			1.40		
Standardised Detection Ratios Invasive cancers < 15mm (3 yr average)	Overall			1.43	≥0.75	≥1.0
Rolling three year Standardised Detection Ratios Invasive cancers (all sizes)	Prevalent			1.71	≥0.75	≥1.0
	Incident			1.44		
	Overall			1.51		
Round Length ≤ 36 months	Overall			87.5	≥90% first offered appts within 36 months	100%
≤ 38 months	Overall			88.1		
Screening to Results - (Date of screen)				97.6	≥90% within 2 weeks	100%
Screening to Assessment (DoFOA)				96.7	≥90% within 3 weeks	100%

Western Unit

KC62 Data 2009 - 2010

Activity Data		Invited	Screened	Assessed	Early Recall	Benign	Total Cancers	DCIS	Inv. Ca	Inv. Ca < 15mm
All Ages	Prevalent (A&B)	5249	2948	164	1	3	27	7	20	8
	Incident (C1&C2)	12539	10475	264	1	3	71	17	54	30
	Early recalls	6	6	6	1	0	1	0	1	1
	Self/GP referrals	0	421	13	1	0	1	0	1	1
	Total	**17794**	**13850**	**447**	**4**	**6**	**100**	**24**	**76**	**40**
50-70	Prevalent (A:50-52 only)	2977	2211	119	1	3	19	5	14	5
	Incident (C1:53-70 only)	10102	8967	191	1	2	52	14	38	22
	Early recalls	6	6	6	1	0	1	0	1	1
	Self/GP referrals	0	319	11	1	0	1	0	1	1
	Total	**13085**	**11503**	**327**	**4**	**5**	**73**	**19**	**54**	**29**

Performance against National Standards					National Standards	
Routine Screen Women aged 50 - 70		2007/08	2008/09	2009/10	Minimum	Target
Uptake %	Prevalent (A)			74.3	>70%	80%
	Incident (C1)			88.8		
	Overall (A-C2)			75.5		
Technical recall/repeats%	Overall			1.3	<3%	<2%
Recall to Assessment %	Prevalent			5.4	<10%	<7%
	Incident			2.1	<7%	<5%
Early Recall %	Overall			0.02	<1%	≤0.25%
Benign open biopsy rate per 1000 women	Prevalent			1.4	<3.6	<1.8
	Incident			0.2	<2.0	<1.0
DCIS per 1000 women screened	Prevalent			2.3	≥0.4	NA
	Incident			1.6	≥0.5	NA
Invasive cancers per 1000 women screened	Prevalent			6.3	≥2.7	≥3.6
	Incident			4.2	≥3.0	≥4.0
Invasive cancers <15mm per 1000 women screened	Prevalent			2.3	>1.5	≥2.0
	Incident			2.5	>1.65	≥2.2
Pre-operative diagnosis rate %	Overall			95.9	≥80%	≥90%
Standardised Detection Ratios Invasive cancers (annual - all sizes)	Prevalent			1.55	≥1.00	≥1.4
	Incident			1.02		
	Overall			1.14		
Standardised Detection Ratios Invasive cancers < 15mm (3 yr average)	Overall			1.17	≥0.75	≥1.0
Rolling three year Standardised Detection Ratios Invasive cancers (all sizes)	Prevalent			1.32	≥0.75	≥1.0
	Incident			1.13		
	Overall			1.18		
Round Length ≤ 36 months	Overall			81.7	≥90% first offered appts within 36 months	100%
≤ 38 months	Overall			88.8		
Screening to Results - (Date of screen)				90.6	≥90% within 2 weeks	100%
Screening to Assessment (DoFOA)				85.0	≥90% within 3 weeks	100%