

Publication Report



Scottish Breast Screening Programme Statistics 2013/14

Annual update to 31 March 2014

Publication date – 21 April 2015



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Introduction

The Scottish Breast Screening Programme (SBSP) is part of a UK-wide programme of free mammographic screening for breast cancer, which was set up in 1988 with the aim of reducing disease-specific mortality. Since full national coverage was attained in 1991 there have been over 3 million screening episodes and in excess of 24,000 breast cancers diagnosed.

In Scotland, women aged 50-64 years were invited for a routine screen once every three years until 2003/04, when the age range for invitation was extended to include women up to the age of 70 years. This expansion was phased in throughout the country over a three year round of screening. Women over 70 years are still screened three-yearly on request.

Up until 2007/08, the screening method used in Scotland consisted of two mammographic views at first screen and one view at subsequent screens. In [Better Cancer Care, An Action Plan](#) the Scottish Government affirmed its commitment to the implementation of two view screening at every screening appointment by April 2010. In 2008/09 a phased roll out of two views commenced and was completed in March 2010.

Within Scotland (as part of the Scottish Breast Screening Programme), information and performance data are compiled by ISD on an annual basis. The UK-wide NHS Breast Screening Programme (NHSBSP) Performance Standards, in which minimum and target standards are specified, are the means by which this information is evaluated. Up until July 2009 the NHSBSP Performance Standards were published based on women aged 50-64; to reflect the expansion of the age range they were extended to include women up to the age of 70 in the July 2010 publication. Details on the NHSBSP Performance Standards are specified in [Consolidated Guidance on Standards for the NHS Breast Screening Programme, NHSBSP Publication no. 60](#).

This release contains data to 31 March 2014, and includes women up to the age of 70. Women are invited to attend screening once every three years and it is more informative to examine trends in performance by three year rolling periods than single years. Therefore NHSBSP Performance Standards are measured and reported by both individual year, and three year rolling periods. Trends in three year rolling NHSBSP Performance Standards, for women aged 50-70, are also included within this publication and are presented from 1 April 2005. Previously published trends in NHSBSP Performance Standards, for women aged 50-64, are available to 31 March 2009 within the Tables and Charts section of the [Breast Screening](#) website.

Additional breast screening statistics, including attendance, uptake by appointment type, biopsy results and outcomes are also included within this publication to 31 March 2014.

Previously published trends in uptake by deprivation category, produced by ISD on behalf of the Scottish Breast Screening Programme, are available in the Tables and Charts section of the [Breast Screening](#) website.

The breast screening year runs from 1 April to 31 March; all statistics are reported for this period.

Key points

NHSBSP performance standards, at 31 March 2014:

- For the latest three-year period, the uptake rate for Scotland has fallen slightly from 73.5% in 2010-13 to 72.9% in 2011-14. The results for both periods exceed the minimum standard of >70%.
- The uptake rate for NHS Greater Glasgow and Clyde was 67.8% in 2011-14. All other NHS Boards achieved the attendance standard of >70% of women invited to a screening appointment.
- Comparing three-year combined performance figures for those women aged 53-70 years with a previous screen within 5 years of attendance, the invasive cancer detection rate has increased from 5.7 per 1,000 women screened in the period 2005-08 to 6.8 in 2011-14.
- In 2013/14, all but 1 of the 13 NHS Breast Screening Programme minimum performance standards were achieved and all but 2 of the 11 targets were met.

In 2013/14:

- Over 1,450 cases of screen detected breast cancer were diagnosed in women of all ages.
- Of these over 80% (1,255 cases) of cancers detected were invasive, of which over half were less than 15mm in size and unlikely to be detected by a physical examination.

Results and Commentary

All breast screening statistics included within this publication can be found on the [Breast Screening](#) homepage of the ISD website.

NHSBSP Performance Standards

In 2013/14, all but 1 of the 13 NHS Breast Screening Programme (NHSBSP) minimum performance standards were achieved and all but 2 of the 11 targets were met (Table 1).

Table 1: Performance data for NHSBSP standards^{1,2,3} in Scotland, 2013/14⁴.

Standard	Appointment type ³	Age group	Minimum Standard	Target	Result 2013/14
Uptake rate (percentage of women invited)	All routine appointments	50-70 years	>= 70%	>= 80%	72.9%*
Invasive cancer detection rate (per 1,000 women screened)	Routine- Initial screen (Prevalent) in response to first invitation	50-52 years	>= 2.7	>= 3.6	5.1*
	Routine- Subsequent screen (Incident) (previous screen within 5 years)	53-70 years	>= 3.1	>= 4.2	6.4*
Small (<15mm) invasive cancer detection rate (per 1,000 women screened)	Routine- Initial screen (Prevalent) in response to first invitation	50-52 years	>= 1.5	>= 2.0	3.2*
	Routine- Subsequent screen (Incident) (previous screen within 5 years)	53-70 years	>= 1.7	>= 2.3	3.6*
Non-invasive cancer detection rate (per 1,000 women screened)	Routine- Initial screen (Prevalent) in response to first invitation	50-52 years	>= 0.4	-	1.4*
	Routine- Subsequent screen (Incident) (previous screen within 5 years)	53-70 years	>= 0.5	-	1.1*
Standardised Detection Ratio (SDR) (observed invasive cancers detected divided by the number expected given the age distribution of the population)	Routine-All initial screens (Prevalent) and Subsequent screen (Incident) (previous screen within 5 years)	50-70 years	>= 0.85	>= 1.0	1.50*
Recalled for assessment rate (percentage of women screened)	Routine- Initial screen (Prevalent) in response to first invitation	50-52 years	< 10%	< 7%	10.1%
	Routine- Subsequent screen (Incident) (previous screen within 5 years)	53-70 years	< 7%	< 5%	3.6%*
Early recall rate (percentage of women screened)	All appointment types ⁵	50-70 years	< 0.5%	<= 0.25%	0.01%*
Benign biopsy rate (per 1,000 women screened)	Routine- Initial screen (Prevalent) in response to first invitation	50-52 years	< 3.6	< 1.8	1.1*
	Routine- Subsequent screen (Incident) (previous screen within 5 years)	53-70 years	< 2.0	< 1.0	0.3*

¹ NHS Breast Screening Programme (NHSBSP) standards as specified in [Consolidated Guidance on Standards for the NHS Breast Screening Programme, NHSBSP Publication no. 60 Version 2](#).

² Females aged 50-70 only.

³ Routine appointments only, self/GP referral and early recall appointments are excluded.

⁴ Financial year runs from 1 April to 31 March.

⁵ Includes self/GP referral and early recall appointments in addition to routine appointments.

* Met minimum standard

Detailed results on all NHSBSP Performance Standards, for both one-year and three-year rolling periods, can be found within the Tables and Charts section on the [Breast Screening](#) homepage.

Uptake

For the latest three-year period, the uptake rate for Scotland has fallen slightly from 73.5% in 2010-13 to 72.9% in 2011-14 (Table 2 and Figure 1). The results for both periods exceed the minimum standard of >70%.

The uptake rate for NHS Greater Glasgow and Clyde was 67.8% in 2011-14. All other NHS Boards achieved the attendance standard of >70% of women invited to a screening appointment.

The mainland NHS Board with the highest uptake rate for 2011-14 was NHS Grampian at 80.3% (Table 2 and Figure 1).

Table 2: Uptake rate¹ by NHS Board of Residence. 2005-08 to 2011-14, three-year rolling periods^{2,3}. Females aged 50-70.

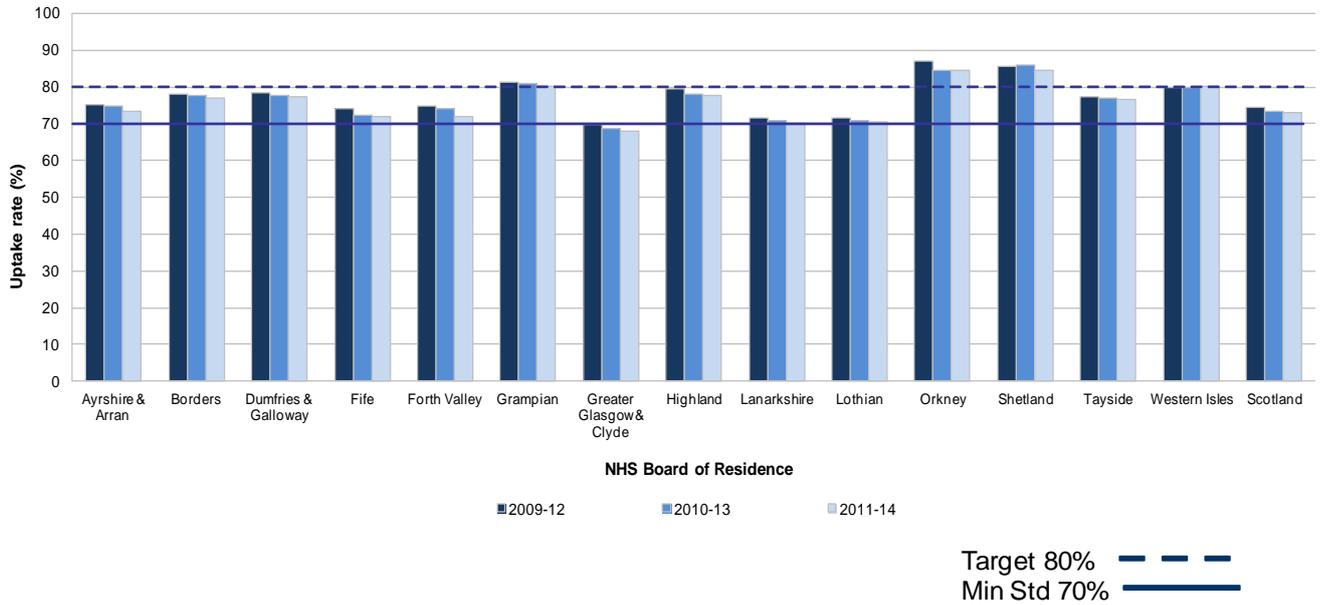
NHS Board of Residence	Uptake rate (%)						
	2005-08	2006-09	2007-10	2008-11	2009-12	2010-13	2011-14
Ayrshire & Arran	75.0	74.8	74.6	75.2	75.1	74.7	73.4
Borders	80.8	79.1	79.1	79.1	78.0	77.8	77.0
Dumfries & Galloway	78.3	78.4	78.6	78.6	78.3	77.8	77.5
Fife	74.7	74.0	73.7	73.8	74.0	72.1	71.8
Forth Valley	75.4	75.3	74.5	74.8	74.7	74.1	72.1
Grampian	82.8	81.5	81.1	81.2	81.4	80.8	80.3
Greater Glasgow & Clyde	71.3	71.0	71.1	70.8	69.8	68.8	67.8
Highland	79.5	79.7	79.6	79.8	79.4	78.1	77.6
Lanarkshire	71.5	71.4	71.7	72.0	71.6	70.8	70.1
Lothian	72.8	71.9	72.0	71.8	71.7	70.7	70.4
Orkney	86.1	86.1	87.0	87.1	87.2	84.7	84.7
Shetland	86.8	86.8	86.4	85.6	85.6	86.0	84.4
Tayside	79.6	79.3	79.2	78.4	77.3	76.9	76.6
Western Isles	80.4	80.6	80.6	80.0	79.7	79.8	80.2
Scotland	75.2	74.9	74.9	74.9	74.5	73.5	72.9

1 Routine appointments only, self/GP referral and early recall appointments are excluded.

2 Three-year periods run from 1 April to 31 March.

3 Women are invited to attend screening once every three years and NHS Boards are not necessarily screened evenly throughout the three year period.

Figure 1: Uptake rate¹ by NHS Board of Residence. 2009-12 to 2011-14, three-year rolling periods^{2,3}. Females aged 50-70.



1 Routine appointments only, self/GP referral and early recall appointments are excluded.

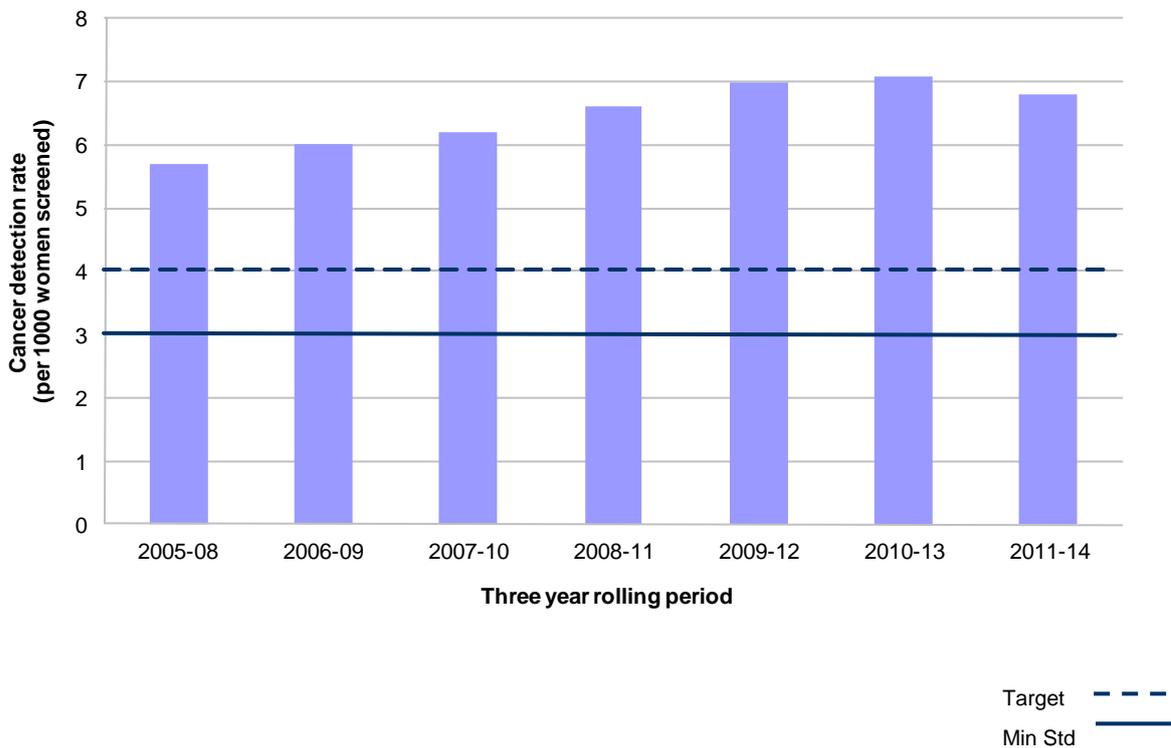
2 Three-year periods run from 1 April to 31 March.

3 Women are invited to attend screening once every three years and NHS Boards are not necessarily screened evenly throughout the three year period.

Cancer detection

Comparing three-year combined performance figures for those women aged 53-70 years with a previous screen within 5 years of last attendance, the invasive cancer detection rate has increased from 5.7 per 1,000 women screened in the period 2005-08 to 6.8 in 2011-14 (Figure 2).

Figure 2: Invasive cancer detection rates¹ for Scotland. 2005/08 to 2011/14, three-year rolling periods². Females aged 53-70 with a previous screen within 5 years of last attendance.



1 Routine appointments only, self/GP referral and early recall appointments are excluded.

2 Three-year periods run from 1 April to 31 March. Women are invited to attend screening once every three years and NHS Boards are not necessarily screened evenly throughout the three year period.

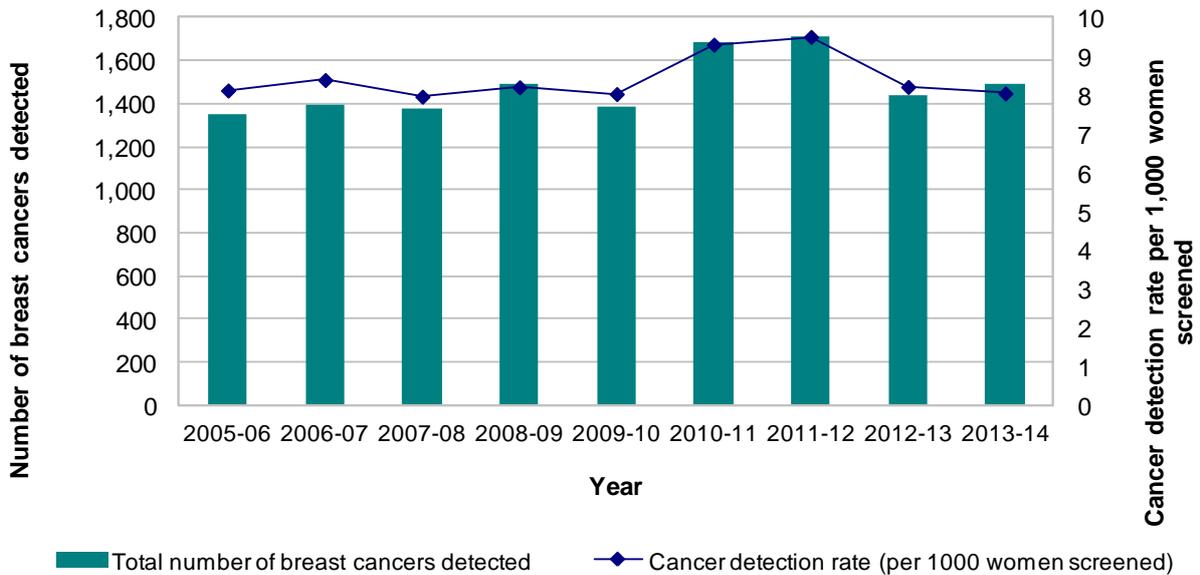
3 During 2008/09, a phased implementation of two view screening at each subsequent round was introduced into the screening programme and this was completed in 2010/11.

Breast screening outcomes

Since 2005/06, the number of screen detected breast cancers has increased by 139 from 1,348 to 1,487 in 2013/14 (Figure 3).

The increase in numbers and rates for 2010/11 and 2011/12 may be due to the phased implementation of the two view screening at subsequent rounds that started in 2008/09.

Figure 3: Number of breast cancers detected, and cancer detection rate per 1,000 women screened^{1,2,3} in Scotland, 2005/06 to 2013/14⁴.



1 Figures are for women of all ages.

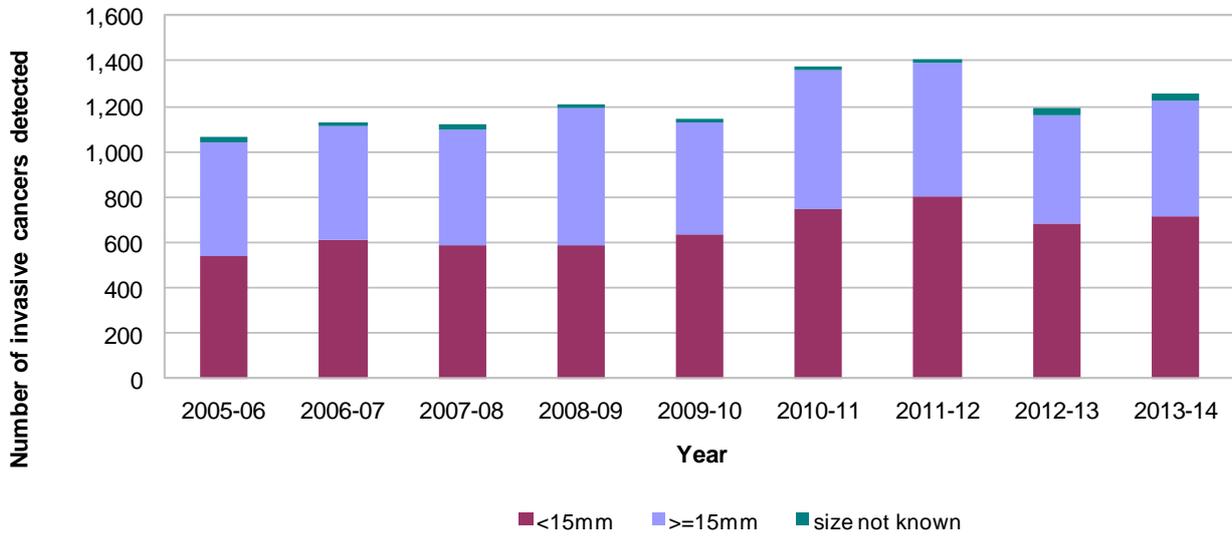
2 Includes self/GP referral and early recall appointments in addition to routine appointments.

3 During 2008/09, a phased implementation of two view screening at each subsequent round were introduced into the screening programme and this was completed in 2010/11.

4 Financial years run from 1 April to 31 March.

In 2013/14, of the 1,255 invasive cancers detected in women of all ages, more than half were less than 15mm in size (Figure 4). These small cancers are unlikely to have been detected by a physical examination, highlighting the importance of screening in the early detection of breast cancer.

Figure 4: Trends in the number of invasive breast cancers detected by size^{1,2,3} in Scotland, 2005/06 to 2013/14⁴.



1 Figures are for women of all ages.

2 Includes self/GP referral and early recall appointments in addition to routine appointments.

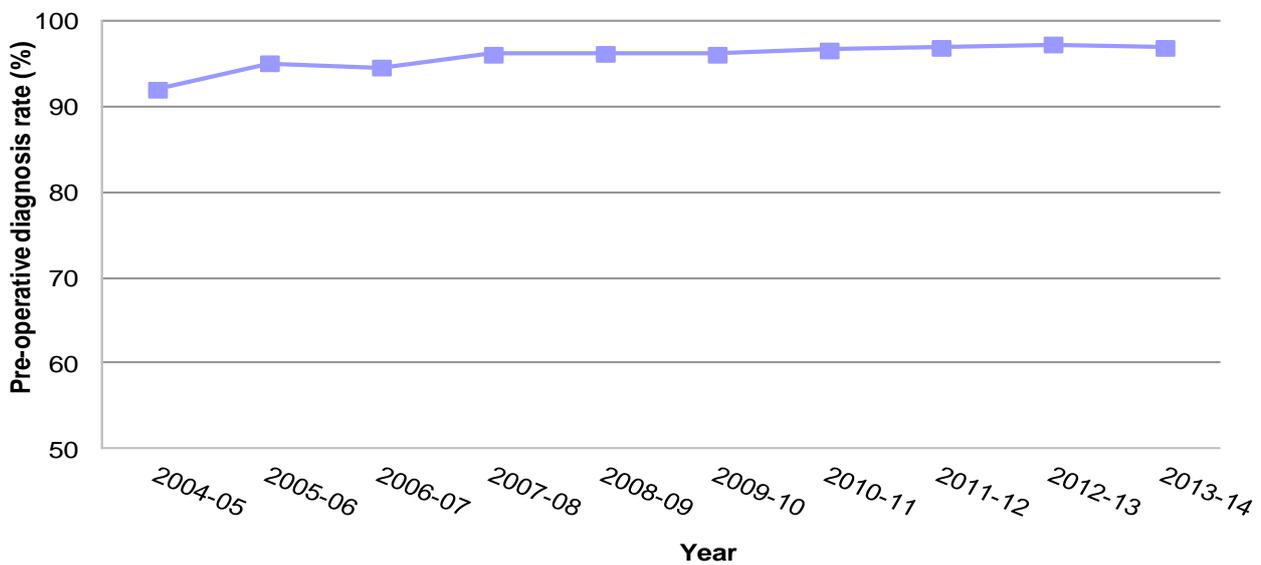
3 During 2008/09, a phased implementation of two view screening at each subsequent round were introduced into the screening programme and this was completed in 2010/11.

4 Financial years run from 1 April to 31 March.

Pre-operative diagnosis rates

In 2013/14 the proportion of cancers for which diagnosis was confirmed pre-operatively was 97.0%. The proportion has remained relatively steady (between 96/97%) over the last 7 years. However, the figure has increased from 92.1% in 2004/05 (see Figure 5 and [Biopsy results](#)). This is due to the development of radiological biopsy techniques. Women are now diagnosed with a breast cancer by radiological biopsy within the screening centre, rather than requiring diagnostic surgery. Therefore the number of women requiring two operations, diagnostic as well as therapeutic, has been significantly reduced.

Figure 5: Trends in pre-operative diagnosis rates^{1,2} in Scotland, 2004/05 to 2013/14³.



1 A pre-operative diagnosis is defined as a malignant result from FNA cytology or a core biopsy procedure.
 2 Figures are for women of all ages.
 3 Financial years run from 1 April to 31 March.

Glossary

Breast screening terms relating to the data within this publication can be found within our [Glossary](#) document on the [Breast Screening](#) homepage.

For the purpose of this publication 'uptake' and 'attendance' are synonymous.

List of Tables

Table No.	Name	Time period	File & size
1	Performance standards	1 April 2013 to 31 March 2014	Excel [23kb]
2	Performance standards (three-year rolling periods)	1 April 2005 to 31 March 2014	Excel [141kb]
3	Uptake by NHS Board	1 April 2005 to 31 March 2014	Excel [33 kb]
4	Historical trends in Performance standards (three-year rolling periods)	1 April 2001 to 31 March 2009	Excel [165kb]
5	Historical trends in Uptake by NHS Board	1 April 1991 to 31 March 2009	Excel [46kb]
6	Uptake by deprivation	1 April 2003 to 31 March 2012	Excel [41kb]
7	Uptake by deprivation (three-year combined periods)	1 April 2003 to 31 March 2012	Excel [34kb]
8	Historical trends in uptake by deprivation	1 April 1990 to 31 March 2008	Excel [35kb]
9	Historical trends in uptake by deprivation (three-year combined periods)	1 April 1990 to 31 March 2008	Excel [33kb]
10	Attendance	1 April 2004 to 31 March 2014	Excel [27kb]
11	Uptake by type of invitation	1 April 2007 to 31 March 2014	Excel [26kb]
12	Biopsy results	1 April 2004 to 31 March 2014	Excel [37kb]
13	Outcomes	1 April 2005 to 31 March 2014	Excel [44kb]

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Further Information

Further information can be found on the [ISD website](#).

Information on major policy changes and the key developments relating to Breast Screening in Scotland since the start of the programme is available within our [Milestones table](#) on the [Breast Screening](#) homepage.

For general enquiries about Cancer screening programmes, please contact Carol Colquhoun, National Screening Coordinator at carol.colquhoun@nhs.net

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Appendix

A1 – Background Information

The UK was one of the first countries in the world to establish a national population-based breast screening programme. The UK National Health Service Breast Screening Programme (NHSBSP), a UK-wide programme of free mammographic screening for breast cancer, was introduced in 1988 following a recommendation from a working party established by the four UK Departments of Health and chaired by Sir Patrick Forrest. The working party concluded that there was evidence that screening for breast cancer could reduce mortality from the disease by up to 30%.

Within Scotland, data are collected by each of the six screening centres (which are supported by 19 mobile units) and retained on the Scottish Breast Screening Programme (SBSP) Information System. The SBSP Information System maintains data holding information relating to each step as a woman moves through her screening episode, including comprehensive radiological, diagnostic and treatment information. More information on the SBSP dataset can be found on our [Data sources](#) page. Data are routinely extracted from the SBSP Information system and analysed by ISD Scotland to help evaluate and monitor the effectiveness of the programme in Scotland. All analytical support for the Scottish Breast Screening Programme is provided by ISD Scotland.

A2 – Publication Metadata (including revisions details)

Metadata Indicator	Description
Publication title	Scottish Breast Screening Programme Statistics 2013-14
Description	Annual breast screening statistics up to 31 March 2014; including National NHS Breast Screening Programme Performance Standards, attendance figures, uptake rates by NHS Board, cancer detection rates, biopsy results, screening outcomes and uptake by deprivation.
Theme	Health and Social Care
Topic	Conditions and Diseases
Format	Excel workbooks
Data source(s)	Scottish Breast Screening Programme (SBSP) Information System
Date that data are acquired	January 2015
Release date	Tuesday 21 April 2015
Frequency	Annual
Timeframe of data and timeliness	Data up to 31 March 2014. No delays between receipt and processing of data for publication.
Continuity of data	<p>Uptake rate by deprivation category (50 to 64 years) is reported from 1990.</p> <p>Uptake rate by NHS Board (50 to 64 years) are reported from 1991.</p> <p>Attendances by appointment type and Biopsy results are reported from 2004. Historic data back to 1991 is available from a previous publication: https://isdscotland.scot.nhs.uk/Health-Topics/Cancer/Publications/2014-04-29/Attendance.xls</p> <p>Three-year NHSBSP Performance standards (50 to 64 years) are reported from 2001.</p> <p>Uptake by deprivation category (50 to 70 years) is reported from 2003.</p> <p>Data is reported from 2005 for the following tables:</p> <ul style="list-style-type: none"> - Uptake by NHS Board (50 to 70 years), - Three year NHSBSP Performance standards (50 to 70 years), - Outcomes. <p>Uptake rate by type of invitation is reported from 2007.</p>

Revisions statement	Figures contained within this publication should not be subject to change in future publications unless changes are made to the NHSBSP Performance Standards or the cohort eligible for screening. In this case, for continuity of reporting, some tables may have to be re-produced.
Revisions relevant to this publication	<p>Up until July 2009, the NHSBSP Performance Standards were published based on women aged 50-64; to reflect the expansion of the age range, they were extended to include women up to the age of 70 in the July 2010 publication. The present release includes data for women aged 50-70 to 31 March 2013. Previously published trends in NHSBSP Performance Standards to 31 March 2009, for women aged 50-64, are still available.</p> <p>For continuity of reporting and to allow for trend analysis in the 50-70 age group some tables have been re-produced back to 2005.</p>
Concepts and definitions	Please see Breast Screening FAQ and Glossary document found at the bottom of the Breast Screening homepage.
Relevance and key uses of the statistics	<p>ISD's Scottish Breast Screening Programme statistics are designed for monitoring and evaluating the effectiveness of the Scottish Breast Screening Programme, including progress against specific national standards and performance indicators. The statistics are used for a variety of other purposes, including:</p> <ul style="list-style-type: none"> • informing Scottish Government planning, including NHS spending and the development of the Scottish cancer care action plan; • informing Health Boards' planning and commissioning of cancer services; • health services research and clinical audit; • promoting changes in societal behaviour, such as increasing screening uptake rates; and • providing information to compare with UK and international health data.
Accuracy	Breast screening data are subject to validation and quality assurance procedures and checks by the Quality Assurance Reference Committee (QARC).
Completeness	At time of extraction, data for the most recent year are estimated to be complete. See above note on Revisions.
Comparability	Breast Screening data are regularly compared mainly to the UK as a whole (e.g KC62 and BASO). In such comparisons, data are provided mainly at national (Scotland) level.
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines .

Coherence and clarity	<p>All Breast Screening tables are accessible via the Breast Screening homepage.</p> <p>Breast Screening data are presented within Excel spreadsheets for each table.</p>
Value type and unit of measurement	<p>Number of women invited to attend for screening and number of women screened are reported as a count; uptake/attendance, biopsy results, recall for assessment, early recall are reported as a percentage; cancer detection is reported as a rate per 1,000 women screened and as Standardised detection ratios.</p> <p>Number e.g 1.1</p>
Disclosure	<p>The ISD protocol on Statistical Disclosure Protocol is followed.</p> <p>For this publication, at the levels of aggregation presented, the risk of disclosure was assessed as being low risk and so no further statistical disclosure control methods were employed.</p>
Official Statistics designation	National Statistics
UK Statistics Authority Assessment	Assessment by UK Statistics Authority for National Statistics designation completed.
Last published	29 April 2014
Next published	19 April 2016
Date of first publication	<p>Uptake by deprivation category (50 to 64 years) is reported from 1990.</p> <p>Uptake by NHS Board (50 to 64 years) are reported from 1991.</p>
Help email	nss.isdcancerstats@nhs.net
Date form completed	April 2015

A3 – Early Access details (including Pre-Release Access)

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD are obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access.

Standard Pre-Release Access:

- Scottish Government Health Department
- NHS Board Chief Executives
- NHS Board Communication leads

A4 – ISD and Official Statistics

About ISD

Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

Purpose: To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.

Mission: Better Information, Better Decisions, Better Health

Vision: To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

Official Statistics

Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of 'Official Statistics'. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

ISD's statistical publications are currently classified as one of the following:

- National Statistics (ie assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (ie legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (ie still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD's statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the [ISD website](#).

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics. Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods, and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.