Breast cancer screening (mammography), survey data and programme data

Number of women aged 50-69 who have received a bilateral mammography within the past two years (or according to the specific screening frequency recommended in each country) divided by the number of women aged 50-69 answering survey questions on mammography (for survey-based data) or eligible for an organised screening programme (for programme-based data).

Note: Countries are invited to supply both survey data and programme data when these two sources are available.

Summary table

<table>
<thead>
<tr>
<th>Programme data</th>
<th>Survey data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Austria</td>
</tr>
<tr>
<td>Finland</td>
<td>Greece</td>
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<td>Italy</td>
<td>New Zealand</td>
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<td>Norway</td>
<td>United States</td>
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<td>Netherlands</td>
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<td>Switzerland</td>
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Sources and Methods

Australia

Survey data not available.

Program data


Coverage:
- National coverage.
- Numerator: Number of women aged 50-69 having received a mammogram through national screening programme over a 24-month period.
- Denominator: Average number of female residents aged 50-69 between the reporting year and the previous year.
- Screening programme: Mammography every two years for women aged 50-69. Data are reported against the latest year in the time period, for example, 2015-2016 are recorded here in 2016.

Austria
Survey data
Coverage:
- National representative sample.
- The survey will be repeated every 5 years.
- Numerator: Number of women aged 50-69 reporting to have received a mammogram during the past 3 years.
- Denominator: Number of women aged 50-69 answering the survey.

Screening programme data not available.

Belgium

Survey data
Source of data: EUROSTAT, European Health Interview Survey.
Coverage:
- Numerator: Number of women aged 50-69 reporting having received a bilateral mammography in the past two years.
- Denominator: Number of women aged 50-69 answering survey questions on mammography.

Programme data
Coverage:
- National coverage.
- Numerator: Number of women aged 50-69 having received a mammogram through or outside the organised screening programme during the past two years.
- Denominator: Number of female residents aged 50-69 in the past two years.
- Screening programme: Mammography every two years for women aged 50-69.

Canada

Survey data
Coverage:
- National representative sample.
- Numerator: Number of women aged 50-69 reporting having received routine screening mammogram or having received mammogram for other reasons within the last two years.
- Denominator: Number of women aged 50-69 answering the survey. For 2003, 2005, 2008 and 2012, non-response was removed.
- There is no national-level data available after 2012 as the module on mammography has been optional content in the CCHS since 2013. For example, in the 2016 CCHS only three provinces selected this content.

Programme data
Source of data:

**Coverage:**
- National coverage.

**2000, 2002, 2004 and 2006 data:**
- **Numerator:** Number of women aged 50-69 having received a mammogram through the organised screening programme during the past two years.
- **Denominator:** Number of asymptomatic women aged 50-69 with no prior diagnosis of breast cancer, in the past two years.

**2009 onwards:**
- **Numerator:** Number of women aged 50-69 screened within a 30-month period (July 1st, 2007 - Dec. 31st, 2009 and July 1st, 2009 - Dec. 31st, 2011).
- **Denominator:** Population of women aged 50-69 (breast cancer prevalent cases excluded).
- Excludes: Yukon and Nunavut since there is no organized screening program in place.

**Break in time series:** 2009.

### Chile

**Survey data**

Source of data:

Deviation from the definition: The data refer to women aged 35 and over.

**Programme data**

Source of data:
- **National Cancer Program. Ministry of Health.**
  - The source of these data is the health files of the primary care population.
  - From 2011 onwards: The source of these data is the **Breast Cancer Report**, specifically the indicator “number of women with valid mammography in the last 3 years”.

Further information:

Coverage:
- From 2011: data include Women aged 50 to 64 who received a bilateral mammography within the past three years through or outside the organized screening programmed in the Public Health System (SNSS).
- In 2016, the data from 2011 were updated in order to cover the population aged 50-64 years old (population beneficiary of FONASA - Public Insurance).

Deviation from definition: Data include only women aged 50 to 64 who are registered in the Public Health System (SNSS) ant who have received a bilateral mammography within the past three years.
- In Chile, Preventive Medicine Exams offered from 2005 to 2008 one mammography for women after age 50. Since 2009, one mammogram is offered for free every three years to all women aged 50 to 64. But the recording of mammographies received by women aged 50 to 64 during the last three years started in 2011 only.

### Czech Republic

**Survey data**

**Coverage:**
- National representative sample survey of population aged 15 years old and over.
- **Numerator:** Number of women aged 50-69 reporting having received a bilateral mammography through or outside the organised screening programme in the past two years.
- **Denominator:** Number of women aged 50-69 answering the survey.

**Screening programme:** Every two years for women over 45 years old.

**Programme data**

**Source of data:** Breast Cancer Screening Database (Institute of Biostatistics and Analyses, Faculty of Medicine and the Faculty of Science, Masaryk University, [www.iba.muni.cz](http://www.iba.muni.cz)).

**Coverage:**
- National coverage.
- Data cover all examinations performed at the accredited screening centres participating in the National breast cancer screening programme.
- **Numerator:** Number of women aged 50-69 having received a mammogram through the organised breast cancer screening programme during the past two years.
- **Denominator:** Number of female residents aged 50-69 years old in the reporting year.

**Screening programme:** Mammography every two years for women aged 45 and over.

**Denmark**

Survey data not available.

**Programme data**

**Source of data:** Quality Database Mammography, Annual Report 2016.

**Coverage:**
- Data covers all of the five regions in Denmark.
- **Numerator:** Number of women aged 50-69 years old who received a mammography through the organised screening programme in the past two years.
- **Denominator:** Number of women aged 50-69 years old who received an invitation to undergo organised breast cancer screening in the past two years. The denominator excludes those who do not need or decline to participate in the screening because of the prior diagnosis of breast cancer as they are not part of the target population who receive a personal invitation.

**Screening programme:** Mammography every two years for women aged 50-69 years old.

**Estonia**

**Survey data**


**Coverage:**
- **Numerator:** Number of women aged 50-69 years old reporting having received a bilateral mammography in the past two years.
- **Denominator:** Number of women aged 50-69 years old answering survey questions on mammography.

**Programme data**

**Source of data:** Estonian Health Insurance Fund database ([www haigekassa ee](http://www haigekassa ee)).

**National Institute for Health Development, Non-infectious diseases prevention department.**

**Coverage:**
- National coverage.
- **Numerator:** Number of women aged 50-62 years old who participated in the national screening programme in a 12-month period.
- **Denominator:** Number of women aged 50-62 years old who were invited to the screening programme in a 12-month period. Invitations are not sent to women who have a diagnosis of breast cancer, who participated in screening or had mammography in the previous year, who do not have valid health insurance (~10%), or whose address in the population register is incomplete, and the denominator excludes these women.
2015-2016: number of women aged 50-62 years old who were invited to the screening programme in a 12-month period. Women who have a diagnosis of breast cancer in past five years or who participated in screening or had mammography in the previous year are not invited to screening and the denominator excludes these women. Women without a valid health insurance are not excluded because they can still participate in screening even though they must pay for the test.

- **Screening programme:** Mammography every two years for women aged 50-65 years old since 2007. Before 2007, there was no regular rule for sending invitations.
  - Deviation from the definition: Age group.
  - Data refer to women aged 45-59 years old for 2002 to 2005, women aged 50-59 years old for 2006 and 2007, women aged 50-65 years old for 2008 and 2009, and to women aged 50-62 years old since 2010.

**Finland**

Survey data not available.

**Programme data**

Source of data: National screening programme.

Coverage:
- National coverage.
- **Numerator:** Number of women aged 50-69 years old who were invited and received a mammogram through the organised breast cancer screening programme during the year.
- **Denominator:** Number of women aged 50-69 years old who received issued personal invitations to undergo organised breast cancer screening during the year. Personal invitations are sent to all women who belong to the target age group.
- **Screening programme:** Mammography every two years (20-26 months) for women aged 50-69 years old. Prior to 2007, for women aged 50-59 years old. Some municipalities have invited women aged 60-64 years old or 65-69 years old.
  - Break in time series: Since 2007, the target age has been 50-69 years old. Earlier, it was 50-59 years old.

**France**

Survey data

Source of data:
- 2014 data: common with EHIS.

Coverage:
- **Numerator:** Number of women aged 50-69 reporting having received a mammogram during the past two years.
- **Denominator:** Number of women aged 50-69 answering the survey questions.

**Programme data**


Coverage:
- Since 2004 there is a countrywide breast cancer screening programme. The French Institut for public health surveillance is in charge of evaluating this programme. The programme is directed to women aged 50-74 but the data have been recalculated in order to match the definition.

**Germany**

Survey data

2012;

Source of data: Robert Koch Institute (RKI), German Health Interview and Examination Survey for Adults (DEGS1): Bundesgesundheitsblatt 2013 56:858-867, “Inanspruchnahme von Krebsfrüherkennungsuntersuchungen - Ergebnisse der Studie zur Gesundheit Erwachsener in Deutschland (DEGS1)”
Coverage:
- **Numerator**: Number of women aged 50-69 reporting having received a bilateral mammography in the past two years.
- **Denominator**: Number of women aged 50-69 answering survey questions on mammography.

The "German Health Interview and Examination Survey for Adults" (DEGS1) is part of the health monitoring of the Robert Koch Institute (RKI) and is designed as a combined cross-sectional and longitudinal survey. The aim of the study is to repeatedly provide nationally representative data on the health status of the adult general population (18-79 years) in Germany.

In order to perform both cross-sectional and longitudinal analyses, a mixed study design was implemented. Therefore, a sample of participants was randomly chosen from local population registries and then supplemented by former participants of the “German National Health Interview and Examination Survey 1998” (BGS98) – a previous nationwide cross-sectional study conducted by the RKI. Representativeness of the collapsed sample for the German general population is ensured by the use of weighting procedures.

In total 8,152 adults took part in the study. Among them were 4,193 participants who had been invited for the first time as well as 3,959 participants who had already taken part in BGS98.

A nonresponse analysis and a comparison of several indicators of the study with official statistics show a high representativeness of this net random sample for the German resident population.

DEGS1 was carried out by the RKI from November 2008 through December 2011.

Using data from the first wave of the German Health Interview and Examination Survey for Adults (DEGS1), current levels of participation in cancer screening services were determined.

2009 and 2014:
**Source of data**: EUROSTAT, European Health Interview Survey (Data extracted in February 2017).
http://ec.europa.eu/eurostat/data/database

**Coverage**:
- **Numerator**: Number of women aged 50-69 reporting having received a bilateral mammography in the past two years.
- **Denominator**: Number of women aged 50-69 answering survey questions on mammography.

**Programme data**
**Source of data**: Kooperationsgemeinschaft Mammographie, Mammographie-Screening-Programm;
Kooperationsgemeinschaft Mammographie 2012, Evaluationsbericht 2008-2009, Berlin, p.103,
Kooperationsgemeinschaft Mammographie 2015, Evaluationsbericht 2005-2012, Berlin, p.16,
Kooperationsgemeinschaft Mammographie 2016, Evaluationsbericht 2014, Berlin, p.11 and
See http://www.mammo-programm.de.

**Coverage**:
- **Screening programme**: Mammography every two years for women aged 50-69. Women are invited to screening based on the inhabitants’ registries. The examination and assessment is free for the women.

**Greece**

**Survey data**
**Source of data**:
- 2006, 2008: Center for Health Services Research, Medical School, University of Athens, “Hellas Health I” and “Hellas Health II” surveys.

**Coverage**:
- 2009, 2014: Data refer to women aged 50-69 who have done a mammography within the past two years divided by the number of women aged 50-69 answering survey questions on mammography.
- 2006, 2008: All women aged 15 and over.
- Screening recommendations: Every one or two years for women aged 40 and over.
Break in time series: 2009 (change in data source).

**Hungary**

**Programme data**

Source of data:
- From 2006 onwards: **National Healthcare Services Center** (ÁEEK in Hungarian) [www.aeek.hu](http://www.aeek.hu).

Coverage:
- Numerator: Number of women aged 50-69 who received a mammogram through the organised breast cancer screening programme during the past two years.
- Denominator: Number of women aged 50-69 who were invited to the organised breast cancer screening programme during the past two years.


**Survey data**

Source of data:
- In 2003: **National Center of Epidemiology** (OEK in Hungarian), **EHIS** (OLEF 2003 in Hungarian), [www.oek.hu](http://www.oek.hu).

Coverage:
- Numerator: number of women age 50-69 reporting having a mammography within the last two years.
- Denominator: number of women age 50-69 answering the survey question.

**Iceland**

Survey data not available.

**Programme data**

Source of data: **Cancer Detection Centre of the Icelandic Cancer Society**.

Coverage:
- National coverage.
- Numerator: Number of women aged 40-69 years old who received a mammogram through or outside the organised breast cancer screening programme during the past two years.
- Denominator: Number of women aged 40-69 years old who were invited to the organised breast cancer screening programme during the past two years.
- Screening programme: Mammography every two years for women aged 40-69 years old.

Deviation from the definition: Age group.

**Ireland**

Survey data not available.

**Programme data**

Source of data: **BreastCheck**. Data compiled from Dept Social welfare, General medical services, Health Insurance providers, self-register, and other estimates capture 98% of the target population.

Coverage:
- National coverage.
- Numerator is the number of women who were eligible for organised screening programme during the index year. The denominator is eligible women which refers to the known target population less those women excluded or suspended (e.g. working abroad, women who defer) by the programme based on certain eligibility criteria.
BreastCheck is transitioning from screening women in the 50-64 age-range to the 50-69 age group. Roll out of this initiative is gradual and is aimed to be completed by 2021.
- Data for 2012 refer to 2012/2013, etc.
- **Screening programme:** BreastCheck reports Annual Uptake (% of women receiving their first invitation (in a round) during the index year who attend for screening in that round). Eligible population is changing year-on-year to fully incorporate women aged 50-69 by 2021. BreastCheck has been a nationwide screening programme since 2007.
- **Deviation from the definition:** Age group.

**Israel**

**Survey data**
- **Source of data:** Israel Center for Disease Control (ICDC), Ministry of Health.
  - 2010: **Israeli National Health Interview Survey (INHIS-2), 2007-2010.** The INHIS-2 2007-2010 survey is the second in a series of population-based National Health Interview Surveys. The INHIS-2 survey was a telephone survey on a representative sample of 10,331 Israelis aged 21 and above.
  - 2004: **Israel National Health Interview Survey (INHIS-1), 2003-2004.** The INHIS-1 2003-2004 is the first in a series of population based National Health Interview Surveys. INHIS was conceived and implemented within the framework of the international EUROHIS project of the WHO. The INHIS-1 survey was a telephone survey on a representative sample of 9,500 Israelis aged 21 and above.
  - For further information regarding INHIS surveys: http://www.health.gov.il/English/MinistryUnits/ICDC/Health_Surveys/Pages/INHIS.aspx

**Coverage:**
- Data are based on self-reported mammography screening in the past two years. The screening programme in Israel includes mammography every two years for women aged 50-74, and the present analysis was based on ages 50-69.

**Source of data:** Central Bureau of Statistics.
- 2010: **The Israeli social Survey.** http://surveys.cbs.gov.il/Survey/surveyE.htm. National representative sample of non-institutionalised civilian population, excluding nomad population in the southern region (about 0.7% of the population). The result from this survey is similar to the result from the INHIS-2 2007-2010 survey.

**Coverage:**
- **Numerator:** Number of women aged 50-69 reporting having received a mammogram during the past two years.
- **Denominator:** Number of women aged 50-69.
- **Screening recommendations:** Mammography every two years for women aged 50-74. Women at high risk are offered annual mammography from 40 and women at very high risk (BRCA carriers) are offered annual MRI.

**Programme data**
- **Source of data:**
  - 2002-2016: Data based on The National Program for Quality Indicators in Community Healthcare in Israel, compiled by the **Directorate of the National Program for Quality Indicators in Community Healthcare in Israel.** Braun School of Public Health and Community Medicine, Hebrew University – Hadassah, Jerusalem. http://healthindicators.org.il/en/reports/. This program is funded by the Israel National Institute for Health Policy and Health Services Research (NIHP).

**Coverage:** Complete.
- **Deviation from the definition:**
  - **Numerator:** Number of women aged 51-74 who have received a bilateral mammography within the past two years.

**Note:** The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

**Italy**
Survey data
Coverage:
- **Numerator**: Number of women aged 50-69 (sampled in the survey) reporting a bilateral mammography during the past two years.
- **Denominator**: Number of resident women aged 50-69 (sampled in the survey).

Programme data
Source of data: Ministry of Health - National Centre for Screening Monitoring. [http://www.osservatorionazionalescreening.it/sites/default/files/allegati/screening_matite_2.pdf#overlay-context=content/i-rapporti-brevi-dell%25E2%2580%2599ons](http://www.osservatorionazionalescreening.it/sites/default/files/allegati/screening_matite_2.pdf#overlay-context=content/i-rapporti-brevi-dell%25E2%2580%2599ons).
Coverage:
- Regional coverage. As of 2015, 82% of the women aged 50-69 were invited to the breast cancer screening programmes. The coverage was 74% for 2014, 74% for 2013, 73% for 2012, 74% for 2011, 69.1% for 2010, 70.7% for 2009, 70.3% for 2008, 62.3% for 2007, 57.6% for 2006, 50.3% for 2005, and 52.0% for 2004.
- **Numerator**: Number of women aged 50-69 who received a mammogram through the organised breast cancer screening programme during the past two years.
- **Denominator**: Number of women aged 50-69 who were invited to the organised breast cancer screening programmes during the past two years. The denominator does not always exclude those who do not need/decline to participate in the screening because of the prior diagnosis of breast cancer.
- **Screening programme**: Mammography every two years for women aged 50-69.

Japan

Survey data
Coverage:
- National representative sample.
- **Numerator**: Number of women aged 50-69 reporting having received a breast cancer screening during the past year (data up to 2007) or the past two years (data since 2010). The numerator includes those women with breast cancer screening other than mammography (e.g., Clinical Breast Examination (CBE) and ultrasonography).
- **Denominator**: Number of women aged 50-69 answering the survey question.
- The survey has been conducted every three years since 2001.
- **Screening recommendation**: Breast cancer screening (including a screening other than mammography) every two years for women aged 40 and over.
  Break in time series: 2010. From 2010, number of women reporting having received a screening in the two years before the survey.

Programme data not available.

Korea

Survey data
Source of data: National Cancer Center, Korea National Cancer Screening Survey, each year.
Coverage:
- National representative sample.
- **Numerator**: Number of women aged 50-69 reporting having received a mammogram during the past two years.
- **Denominator**: Number of women aged 50-69 answering the survey.
- **Screening programme**: Mammography every two years for women aged 40 and over.

Programme data
Source of data: National Health Insurance Corporation (NHIC), unpublished data.
Coverage:
- National coverage.
- **Numerator**: Number of women aged 50-69 who were invited to the breast cancer screening programme and had a mammography through the organised breast cancer screening programme during the year.
- **Denominator**: Number of women aged 50-69 who were invited to a mammography organised by the breast cancer screening programme during the year.
- **Screening programme**: Mammography every two years for women aged 40 and over.

**Break in time series**: Prior to 2008, data refer to women aged 50 and over. From 2008 onwards, data refer to women aged 50 to 69.

### Latvia

**Source of data**: National Health Service.

**Coverage**:
- Data are collected, dividing number of women who have taken tests in current year by the number of sent invitation letters (letter is valid for two years) in current year.
- Age group for breast cancer screening: 50-69.
- Note: Screening programme in Latvia was launched in 2009. Invitation to breast cancer screening is valid for 2 years.
- In 2011, invitation letters sent to large target population and received in 2009 and 2010 were also valid. Due to the social activities and informative measures, as well as support from professional associations of gynaecologists and general practitioners, population interest in screening grew, therefore also rise in the number of examinations performed basing on the invitation letters was recorded.
- The reasons for the strong increase in 2017 are the following:
  1. In 2016, NHS had technical problems to deliver system generated invitation letters for part of the target population. Hence many invitations (valid for two years) were sent at the end of 2016, and screening was done in 2017. This explains the low rate in 2016 and the high rate in 2017.
  2. In 2017, the government has done several organisational changes in order to increase cancer screening rates.

### Luxembourg

**Survey data**: EHIS Wave 2

**Programme data**


**Coverage**:
- Inclusion: Invitations are sent to resident women aged 50-69 years covered by the statutory health insurance scheme. Screening is also offered on request to non-resident women covered by the statutory health insurance scheme who commute from neighbouring countries.
- Exclusion: Women who report a previous bilateral mastectomy.
- **Numerator**: Number of women aged 50-69 who have had a mammography through the organized screening program within the past two years (years X and X+1)
- **Denominator**: Number of invitations sent to resident women aged 50-69 years old covered by the national health insurance during the reporting year (X).

- Target age group is 50-69 years old since 2001, but it was 50-64 years old prior to 2001.
- Note:
  - Data for years 2000-2014 have been revised in order to better match the OECD definition
  - The rates for 2016 and 2017 are preliminary.

### Mexico

**Survey data**


**Coverage**:
- National representative data.
Numerator: Number of women aged 50-69 who attended the preventive medicine module for detection of breast cancer (mammography) during the last 12 months.

Denominator: Number of women aged 50-69 answering the survey question.

Screening programme: Every year for women aged 50-69.

Programme data

Coverage:
- The data only refer to public institutions.
- Numerator: Number of women aged 50-69 who attended the preventive medicine module for detection of breast cancer (mammography) in the public institutions during the last 12 months.
- Denominator: Number of women aged 50-69 who were invited to the preventive medicine module for detection of breast cancer (mammography) in the public institutions during the last 12 months. Denominator includes women with prior diagnosis of breast cancer.
- Screening programme: Every year for women aged 50-69.

Netherlands

Survey data
Source of data:
- 2005 onwards: Data from the Health Interview Survey.

Coverage:
- National representative sample.
- Numerator: Number of women aged 50-69 years old reporting having received a mammogram during the past two years.
- Denominator: Number of women aged 50-69 years old answering the survey question. The denominator excludes those who answered 'don't know'.
- 2000 data refer to women aged 50-69 years old who had ever had a mammography.
- Screening programme: Mammography every two years for women aged 50-75 years old.


Programme data
Source of data: National Evaluation Team for Breast cancer screening, administration of the breast cancer screening organisations.

Coverage:
- National coverage.
- Numerator: Number of women aged 50-69 years old who received a mammogram through the organised breast cancer screening programme during the specific period. The numerator includes the women who were invited to the screening in the reporting year and had a mammogram just before the reporting year or a few months after the end of the reporting year.
- Denominator: Number of women aged 50-69 years old who were invited to the organised breast cancer screening during the reporting year. The denominator does not include women not in the Population Registration. Women who declared not wanting an invitation anymore (definite refusers) and women with an interval or carcinoma screening generally do not receive an invitation for subsequent screens, so they are not included in the denominator.
- Screening programme: Mammography every two years for women aged 50-75 years old.

New Zealand

Survey data
Source of data: New Zealand Health Survey, Ministry of Health.

Coverage:
- Numerator: Number of women aged 50-69 reporting having received a mammogram within the past two years.
- Denominator: Number of women aged 50-69 answering the survey question.
- New Zealand Health Survey usually shows a greater screening coverage than the BreastScreen Aotearoa (BSA)
programme figures because the survey includes women who have screening mammography outside the national screening programme. However, BSA’s data sources are considered a more accurate record of screening events than the national survey for calculating total population coverage. This data source is no longer available as the question is no longer asked as part of the NZ Health Survey.

Programme data
Source of data: BreastScreen Aotearoa (BSA) a screening programme of the National Screening Unit.
Coverage:
- National coverage.
- **Numerator**: Number of women aged 50-69 who underwent mammography screening through an organised screening programme within the public health system during the two year period prior to the annual reporting period ending on 31 December. The numerator excludes those screened privately such as opportunistic screenings and high-risk women in the age group screened annually outside the programme (in diagnostic services). Both women with first screening events (women newly enrolled in the programme) and those with subsequent screening events (women already enrolled) are included.
- **Denominator**: The BSA coverage denominator is the number of eligible women aged 50-69 years in New Zealand at the mid-point of the 24 month screening period, as derived from Statistics New Zealand’s district health board (DHB) population projections. 2017, 2016, 2015, 2014, and 2013 coverage uses the 2016 update of the 2013 Census based projections. Earlier coverage estimates use the 2011 update of the 2006 Census based projections.
- **Screening programme**: Mammography every two years for women aged 45-69. Between 1999 and July 2004, for women aged 50-64.
- From 2006, data refer to women aged 50-69 years, but 2002-2005 data refer to women aged 50-64.

Norway

Survey data not available.

Programme data
Source of data: Norwegian Breast Cancer Screening Programme.
Coverage:
- National coverage.
- **Numerator**: Number of women aged 50-69 years old who received a mammography through the organised breast cancer screening programme during the past two years.
- **Denominator**: Number of women aged 50-69 years old who were invited to the organised breast cancer screening programme during the past two years. The denominator excludes those who do not need/decline to participate in the screening because of the prior diagnosis of breast cancer.
- **Screening programme**: Mammography every two years for women aged 50-69 years old.

Poland

Survey data
Source of data: Central Statistical Office (CSO).
- 2004: Health Interview Survey.
Coverage:
- **Numerator**: Number of women aged 50-69 years old reporting having received their last mammography in the past two years.
- **Denominator**: Number of women aged 50-69 years old answering the survey question.

Programme data not available.

Portugal

Survey data
Source of data: National Heath Survey 2005/2006, developed in partnership by National Health Institute Doutor Ricardo Jorge (INSA) and Statistics Portugal.
National Heath Survey 2014, developed in partnership by National Health Institute Doutor Ricardo Jorge (INSA) and Statistics Portugal.

Coverage:
- National coverage.
- Data collection of the National Heath Survey 2005/2006 took place between February 2005 and February 2006. Results regarding the percentage of females that undertook breast cancer screening were reported to a single year (2005), having in mind that the data collection took place mostly during that year.
- Data collection of National Heath Survey 2014 took place between October and December 2014.

Programme data not available.

Slovak Republic

Survey data
Source of data: EUROSTAT, European Health Interview Survey 2009 (data extracted in March 2012) and European Health Interview Survey 2014 (data extracted in April 2017).

Coverage:
- Numerator: Number of women aged 50-69 reporting having received a bilateral mammography in the past two years.
- Denominator: Number of women aged 50-69 answering survey questions on mammography.

Programme data
Source of data: National health Information Center (NHIC), Annual report on activity of radiology. Data for years 2006 – 2016 were revised and recalculated in 2018.

Coverage:
- In the SR the mammography screening programme is for women aged 40 – 69, and mammography screening programme received only women who participated in the gynaecological preventive care programme examination.

Calculation for reporting year X:
- Numerator: Number of women aged 40-69 who received preventive mammography in year X plus Number of women aged 40-69 who received preventive mammography in year (X - 1).
- Denominator: Average number of women aged 40-69 within the women population in the years X and (X - 1).
- Screening programme: Every two years for women aged 40-69.

Deviations from the definition: Age group.

Slovenia

Survey data
Source of data:

Coverage:
- Population living in private households (persons living in institutions are excluded).
- National representative data.
- The percentage of women aged 50-69 years old who reported having had the last mammography during the past two years.
- Screening recommendation: Mammography every two years for women aged 50-69 years old.

Programme data
Source of data: Epidemiology and Cancer Registries, Institute of Oncology Ljubljana.

Coverage:
- Geographic coverage is complete; programme is currently covering all eligible population. Pilot programme, which started in April 2008, has been expanding and till the end of 2017 it has covered by invitations 95 % of eligible Slovenian women population (cerca 70.000 women screened in 2017).
- **Numerator**: Number of women aged 50-69 years old who had a mammogram through the organised breast cancer screening from invited in the specified time period.
- **Denominator**: Number of women who were invited to the organised breast cancer screening in the specified time period.
- **Screening recommendation**: Mammography every two years for women aged 50-69 years.
- Screening data and data from Central Population Registry is collected in the central database of the Breast Cancer Screening Registry DORA on a daily basis.

**Spain**

**Survey data**
**Source of data**: Ministerio de Sanidad, Servicios Sociales e Igualdad (Ministry of Health, Social Services and Equality) and Instituto Nacional de Estadística - INE (National Statistics Institute).
- Encuesta Europea de Salud en España (European Health Interview Survey (EHIS), 2014).
- Encuesta Nacional de Salud (National Health Survey), 2011.
- EUROSTAT, European Health Interview Survey 2009 (data extracted in March 2012).

**Coverage**:
- **Numerator**: Number of women aged 50-69 reporting having received a bilateral mammography in the past two years.
- **Denominator**: Number of women aged 50-69 answering survey questions on mammography.

**Programme data** are not available.

**Screening programme**: Every two years for women aged 50-69.

**Sweden**

**Survey data**
**Source of 2014 data**: EUROSTAT, European Health Interview Survey.

**Coverage**:
- **Numerator**: Number of women aged 50-69 reporting having received a bilateral mammography in the past two years.
- **Denominator**: Number of women aged 50-69 answering survey questions on mammography.

**Switzerland**

**Survey data**

**Coverage**:
- **Numerator**: Number of women (aged 50-69) reporting having undergone a breast cancer screening test, i.e. mammography, within the past two years.
- **Denominator**: Number of women aged 50-69 answering the survey questions on mammography.
- **Screening programme**: mammography every two years for women aged 50-70.

**Programme data** are not available.

**Turkey**

**Programme data**
**Source of data**: Cancer Control Department, The Ministry of Health of Turkey.

**Coverage**:
- Throughout the entire country.
- **Numerator:** Number of women aged 40-69 screened in the past two years taken into account (incl. mammography screenings on biennially basis of public based screening (by invitation) and opportunistic screenings in KETEMs) and number of mammographies performed for women with no age limitation on a year basis as opportunistic screenings in other health institutions.
- **Denominator:** Number of women aged 40-69 in current year has been used as denominator.
- **Screening Programme:** Women over 40 have biennial mammography screenings. Screening ends at the age of 69. Screenings performed by invitation are made at the KETEMs (Cancer Early Diagnosis, Screening and Education Centers). Opportunistic screenings are performed among the women aged 40-69 (from 2013 onwards) in KETEMs and among women with no age limitation in other health institutions.

**Deviation from the definition:** Target population for breast cancer screening in Turkey is 40-69.

**Survey data**
Source of data: TURKSTAT, European Health Interview Survey (EHIS) 2014 and 2016.

**Coverage:**
- Self-reported last breast examination by X-ray among women: Percentage of women aged 50-69 who reported that they had a mammography examination within the past two years.

**United Kingdom**

**Survey data**
Source of data: European Health Interview Survey 2014 (extraction from Eurostat database in May 2017).

**Coverage:** Percentage of women aged 50-69 who reported to have had a breast examination by X-ray within the past two years.

**Programme data**
Source of data: Calculated by the NHS Digital (http://content.digital.nhs.uk/) using coverage data from:
- Wales: Public Health Wales.
- Northern Ireland: HSCNI.
- Data for Scotland are not available.

**Coverage:**
- England only for 2002.
- The time series has been revised in 2015. Coverage is measured over a three year period, which is different to uptake which is measured over a one year period. The other key difference between coverage and uptake is that uptake only looks at women who have been invited for screening whereas coverage looks at those who have been screened through any means (i.e. following an invitation or GP/self-referral). Coverage is defined as the percentage of women in the population who are eligible for screening at a particular point in time, who have had a test with a recorded result within the last three years. Uptake is the percentage of women invited for screening in the year, who were screened adequately within 6 months of invitation.

**Numerator:**
- 2002-2009: Number of women aged 53-64 in England and Wales screened within the last three years.
- 2010: Number of women aged 53-64 in England and 53-70 in Wales screened within the last three years.
- 2010-2013: Number of women aged 53-69 in England and 53-70 in Wales screened within the last three years.
- 2014 onwards: Number of women aged 53-69 in England, 53-70 in Wales and 53-70 in Northern Ireland screened within the last three years.

**Denominator:**
- 2002-2009: Number of women aged 53-64 in England and Wales who have not had a bilateral mastectomy.
- 2010: Number of women aged 53-64 in England and 53-70 in Wales who have not had a bilateral mastectomy.
- 2010-2013: Number of women aged 53-69 in England and 53-70 in Wales who have not had a bilateral mastectomy.
- 2014 onwards: Number of women aged 53-69 in England, 53-70 in Wales and 53-70 in Northern Ireland who have not had a bilateral mastectomy.
Deviation from the definition: Age group. Currently coverage in England is best assessed from 53 years as women may be first called at any time between their 50th and 53rd birthdays.

United States

Survey data
Coverage:
- National Representative Sample of the U.S. Civilian Non-Institutionalised Population, females aged 50-69 years.
- Numerator: Number of women aged 50-69 reporting having received a mammogram within the past two years.
- Denominator: The denominator excludes respondents (females aged 50-69) who reported ‘Refused’, ‘Not ascertained’, or ‘Don’t know’ to the question ‘Have you ever had a mammogram?’.
- Screening recommendation: Mammography every one or two years for women in target age groups. The lowest age for the target group varies from around 40 to 50.
- The reference period was increased from one year to two years to improve comparability with the majority of other OECD countries (7 out of 13 countries that use survey data use a two-year reference period).
Estimation method:
- Data have been estimated based on Method B from 2005.
- Method B was formulated by the National Cancer Institute (NCI) to provide the analyst a protocol to study trends overtime based on a common methodology of cancer screening. This method is consistent with the methods used in 2000 and 2003 by the National Cancer Institute and the Office of Analysis and Epidemiology as well as the National Center for Health Statistics. More information can be found at http://www.cdc.gov/NCHS/nhis/nhis_2008_data_release.htm.
Break in time series: No breaks in time series.

Programme data not available.

NON-OECD ECONOMIES

Lithuania

Source of data: Health Information Centre of Institute of Hygiene, data from Compulsory Health Insurance Database.
Coverage: National breast cancer screening programme covers women aged 50-69 every 2 years. Programme was started in 2005.