

BREAST CANCER SCREENING PROGRAM

ANNUAL REPORT ON SCREENING IN 2022

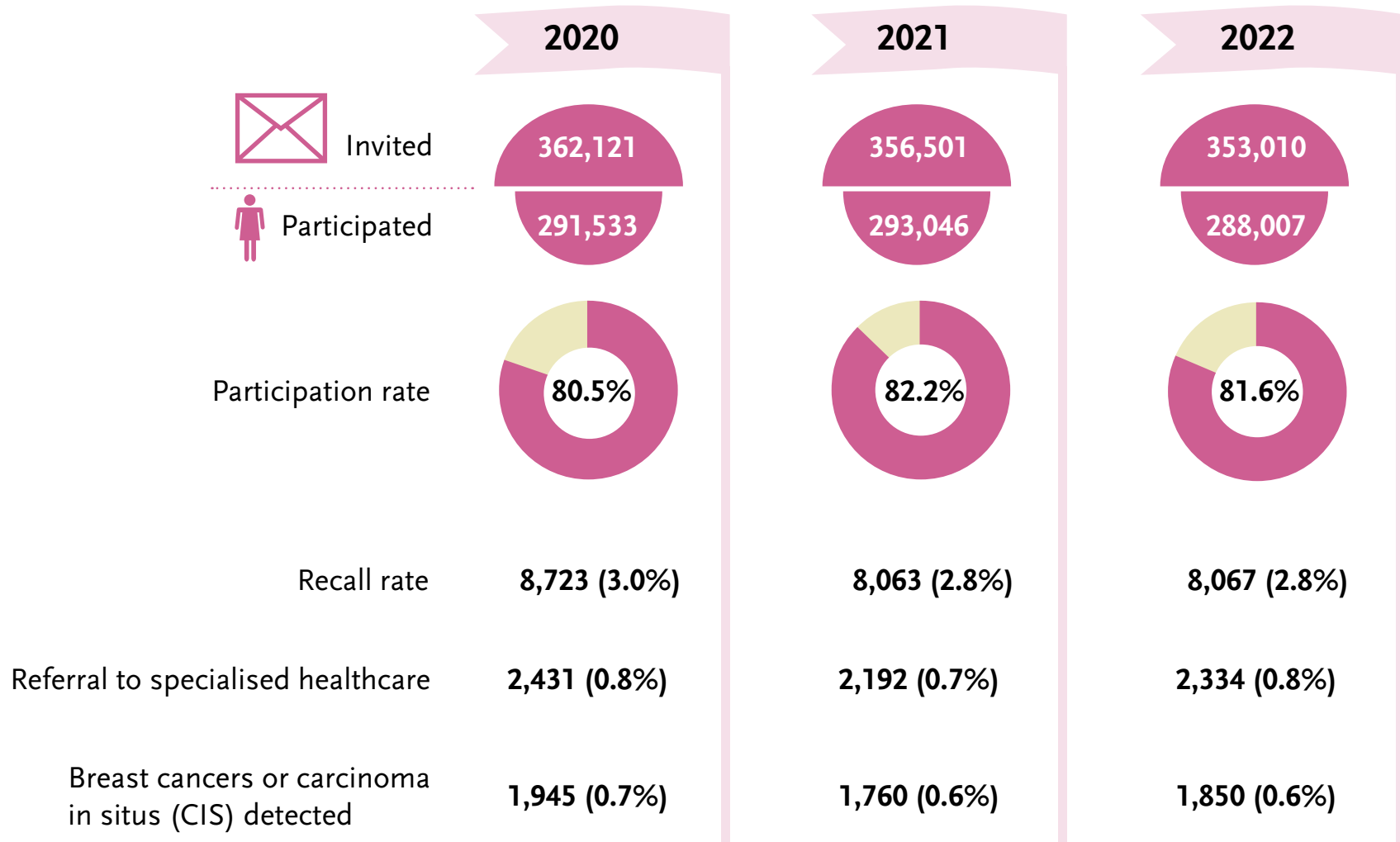
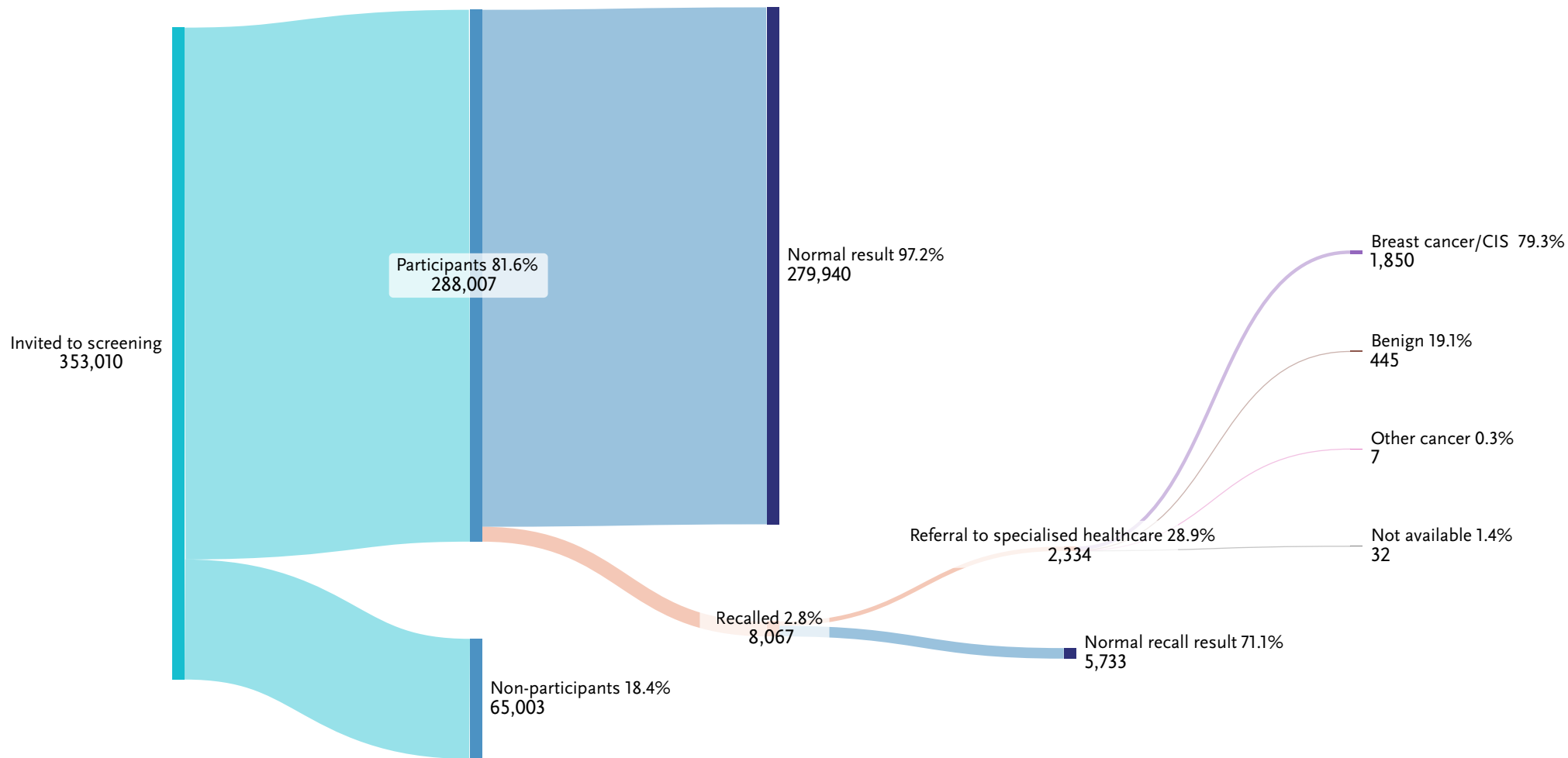


FIGURE 1. Screening program process in 2022.



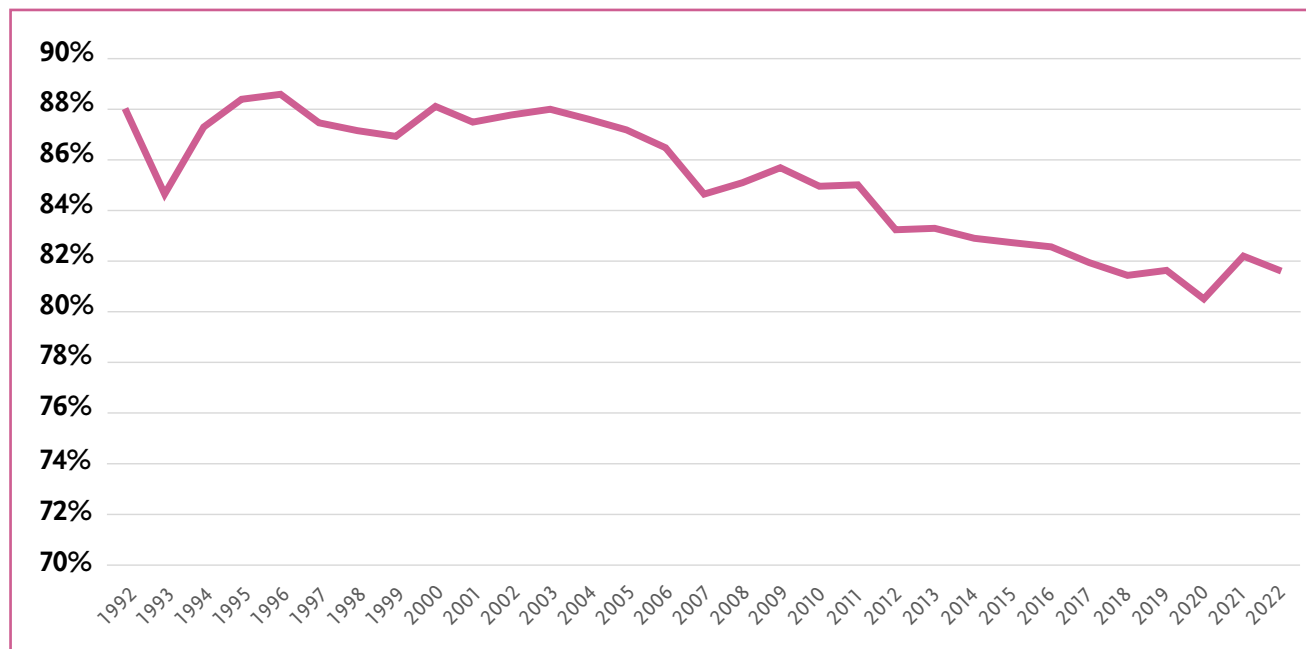
SECTION 1. PARTICIPATION IN THE SCREENING PROGRAM

TABLE 1. Breast cancer screening target population and women invited and participated in 2022.

Age group	Screening round 2021–2022)			Screening year 2022		
	Target population	Invited		Invited	Participated	
	N	N	%	N	N	%
50–54	161,291	160,934	99.8	97,256	79,079	81.3
55–59	182,560	182,293	99.9	73,005	59,214	81.1
60–64	181,156	181,007	99.9	108,273	88,704	81.9
65–69	183,524	183,469	100	74,476	61,010	81.9
Total	708,531	707,703	99.9	353,010	288,007	81.6

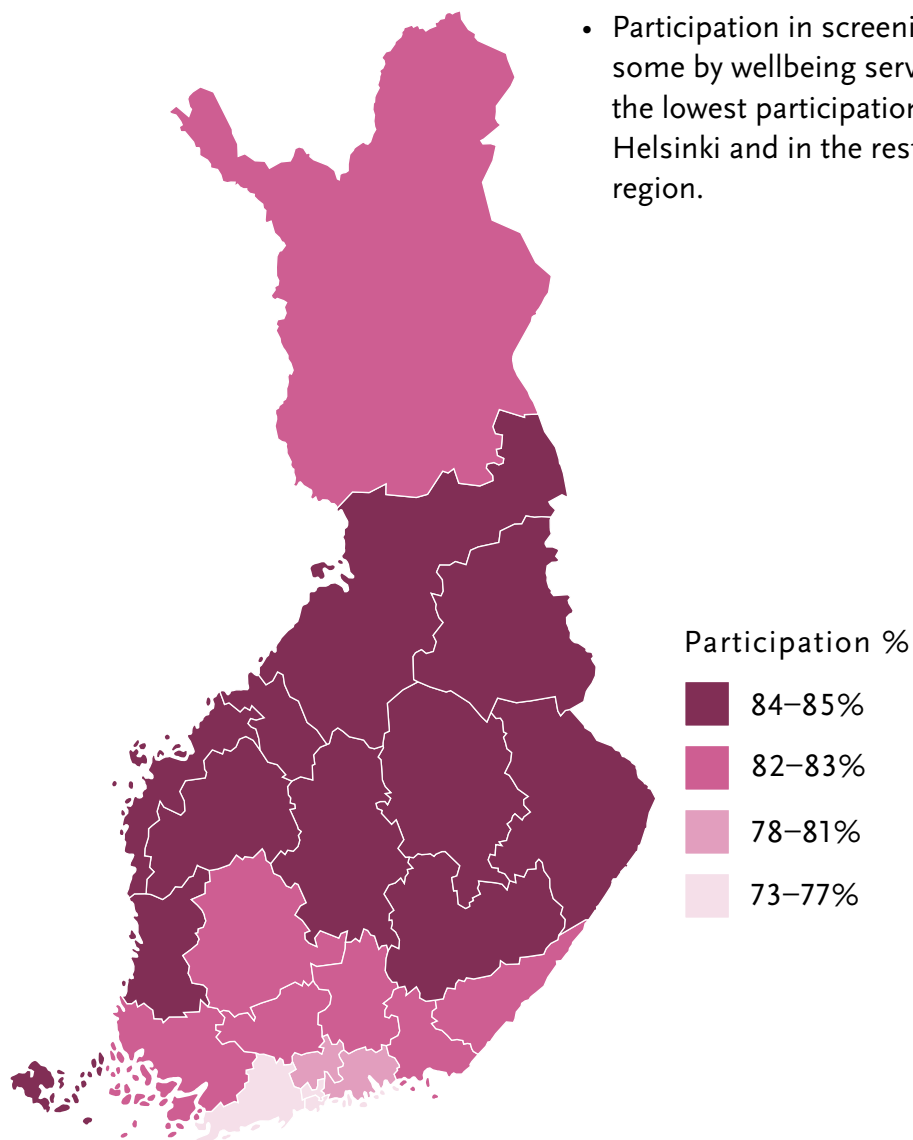
- Of those invited, 81,6% attended the screening and participation was fairly even between age groups.
- The coverage of screening invitations in the target population was almost 100% in the age group 50–69 years.

FIGURE 2. Participation in breast cancer screening (%) 1992–2022.



- Participation in screening has gradually declined, falling from around 87% in 1992 to 82% in 2022.

FIGURE 3. Breast cancer screening participation rate by wellbeing services county in 2022.



- Participation in screening varied some by wellbeing services county, the lowest participation rate was in Helsinki and in the rest of Uusimaa region.

Breast cancer screening program in Finland

- The national breast cancer screening program started in Finland in 1987. The expansion of the target population for breast cancer screening to all women aged 50–69 began in 2007, and since 2016, practically all women in the target population have been invited for breast cancer screening every two years.
- According to the Government decree on screening, breast cancer screening must be organized for women aged 50–69 every 20–26 months.
- The aim of mammography screening is to detect breast cancer as early as possible, even in the asymptomatic stage. The goal is to reduce mortality caused by breast cancer.
- Municipalities were responsible for organizing the screening program until the end of 2022, after which the responsibility has been with the wellbeing services counties and the city of Helsinki. In Åland, screening is organized regionally. The wellbeing services county can carry out the screenings independently, together with other wellbeing services counties, or as a purchased service.
- The units carrying out the screening send out screening invitations and perform mammography examinations and recall to follow-up examinations if necessary. Diagnostic confirmation of breast cancers and further measures are carried out in specialized medical care.
- Screening mammography and any necessary follow-up tests are free of charge for the screened individual. A fee determined by the wellbeing services county is charged for further examinations and treatments in specialized medical care.

SECTION 2. RESULTS OF THE SCREENING PROGRAM

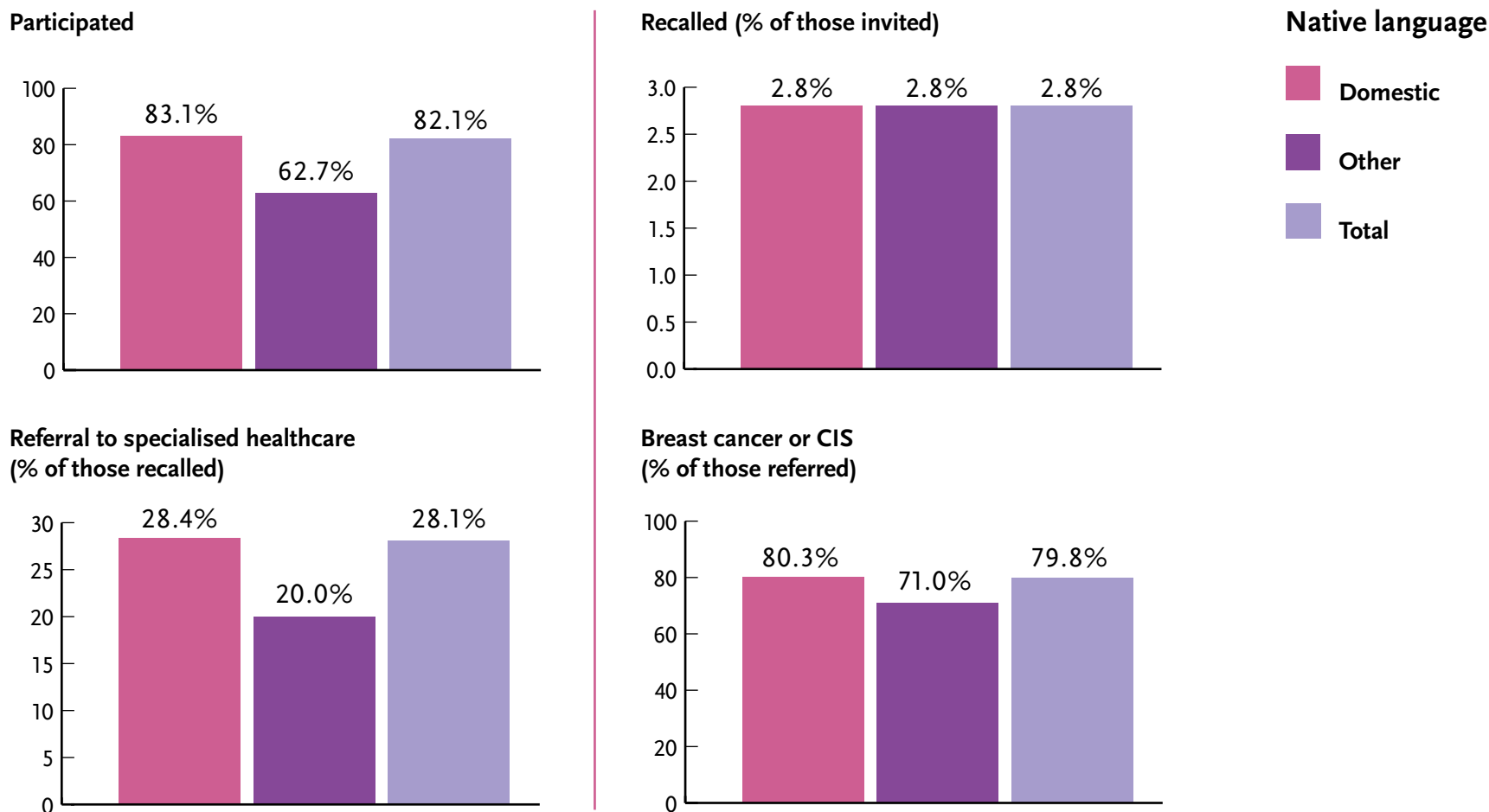
TABLE 2. Screening results by age group in 2022.

Age group	Participated	Recalled		Referral to specialised healthcare		Breast cancer or CIS	
	n	n	%	n	%	n	%
50–54	79,079	3,103	3.9	541	0.7	346	0.4
55–59	59,214	1,409	2.4	407	0.7	317	0.5
60–64	88,704	2,051	2.3	760	0.9	649	0.7
65–69	61,010	1,504	2.5	626	1.0	538	0.9
Total	288,007	8,067	2.8	2,334	0.8	1,850	0.6

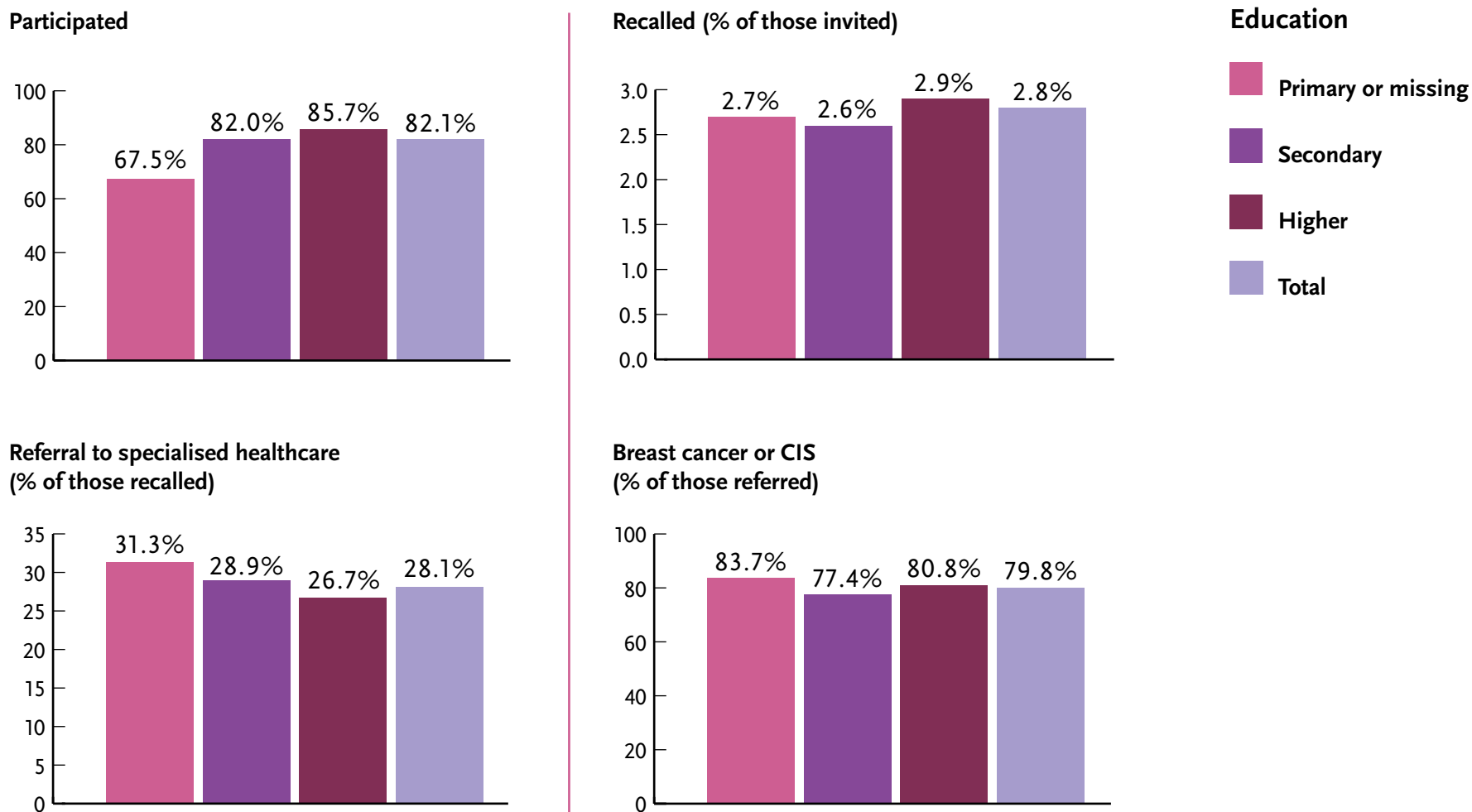
- Of those screened, 97.2% had a normal screening result and 2.8% were recalled.
- Referrals for specialised healthcare were about 2,300, 0.8% of those screened.
- In total, 1,850 cases of breast cancer or breast carcinoma in situ were detected in the programme, about 6 cases per 1,000 women screened.

TABLE 3. Invitations, participation and screening results for women aged 50–69 by wellbeing services county in 2022.

Wellbeing services county	Invited	Participated	%	Recalled	%	Referral to specialised healthcare	%	Breast cancer or CIS	%
	n	n	%	n	%	n	%	n	%
Central Finland	16,858	14,243	84.5	334	2.3	109	0.8	90	0.6
Central Ostrobothnia	4,014	3,421	85.2	65	1.9	21	0.6	13	0.4
Central Uusimaa	13,377	10,773	80.5	480	4.5	79	0.7	64	0.6
East Uusimaa	6,878	5,599	81.4	123	2.2	28	0.5	25	0.4
Helsinki	38,719	28,431	73.4	895	3.1	230	0.8	206	0.7
Kainuu	5,047	4,337	85.9	188	4.3	33	0.8	22	0.5
Kanta-Häme	11,661	9,722	83.4	247	2.5	63	0.6	45	0.5
Kymenlaakso	11,541	9,627	83.4	306	3.2	98	1.0	69	0.7
Lapland	12,149	9,970	82.1	300	3.0	99	1.0	57	0.6
North Karelia	11,143	9,396	84.3	279	3.0	66	0.7	57	0.6
North Ostrobothnia	23,932	20,322	84.9	452	2.2	163	0.8	129	0.6
North Savo	16,853	14,296	84.8	507	3.5	126	0.9	84	0.6
Ostrobothnia	10,151	8,635	85.1	200	2.3	80	0.9	55	0.6
Pirkanmaa	31,867	26,218	82.3	576	2.2	203	0.8	172	0.7
Päijät-Häme	14,169	11,751	82.9	152	1.3	59	0.5	54	0.5
Satakunta	14,566	12,351	84.8	454	3.7	182	1.5	126	1.0
South Karelia	8,821	7,275	82.5	171	2.4	68	0.9	45	0.6
South Ostrobothnia	12,346	10,504	85.1	267	2.5	92	0.9	84	0.8
South Savo	9,834	8,257	84.0	282	3.4	55	0.7	40	0.5
Southwest Finland	31,107	25,924	83.3	931	3.6	245	0.9	203	0.8
Vantaa-Kerava	16,024	12,304	76.8	242	2.0	74	0.6	67	0.5
West Uusimaa	29,680	22,711	76.5	588	2.6	153	0.7	135	0.6
Åland	2,273	1,940	85.3	28	1.4	8	0.4	8	0.4
Total	305,033	251,052	81.6	7,209	2.8	2,099	0.8	1,640	0.6

FIGURE 4. Participation to screening and main findings by native language in 2022.

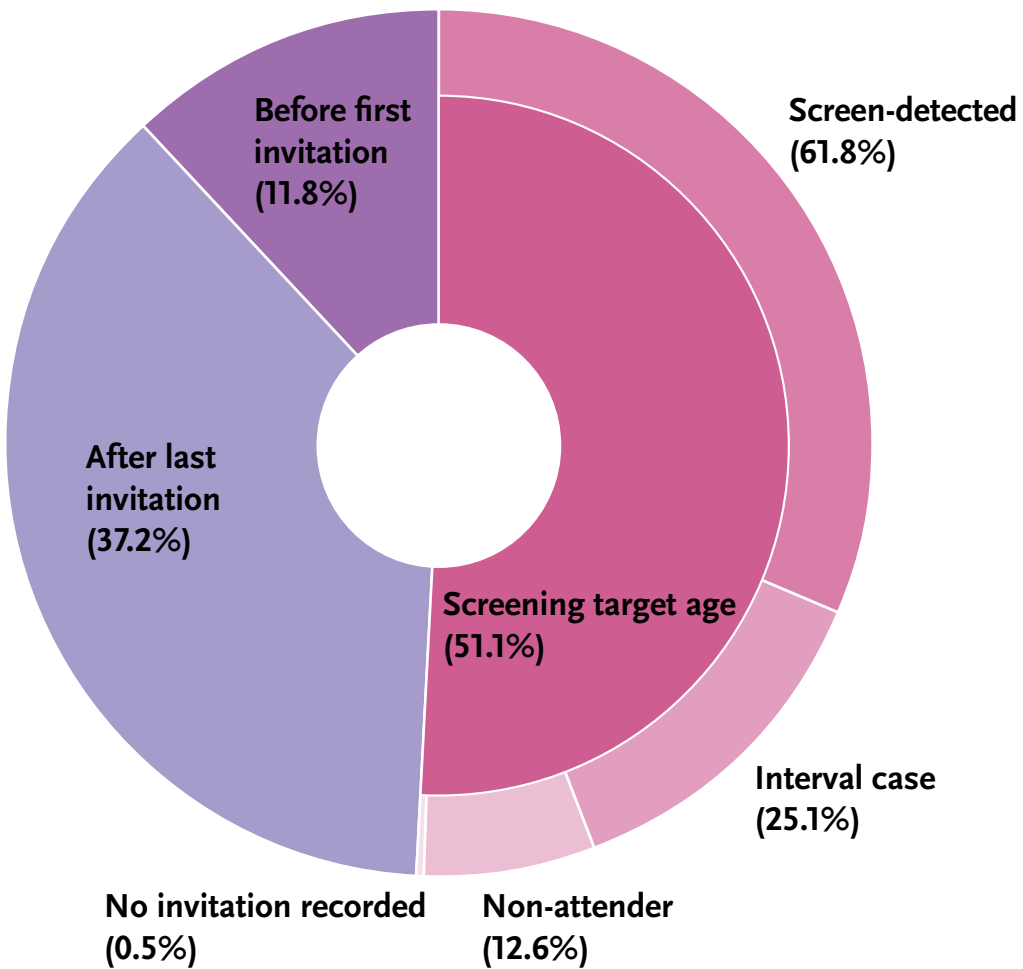
- The participation rate in screening was clearly lower in the nondomestic language population group than in the domestic language group. In this language group breast cancer and carcinoma in situ diagnoses were also slightly lower than in the domestic language group.

FIGURE 5. Participation to screening and main findings by education level in 2022.

- The higher the level of education, the higher the participation rate in screening. However, there were no significant differences observed in the recall rate or referral rate to specialised health or in the detection rate of breast cancer or carcinoma in situ.

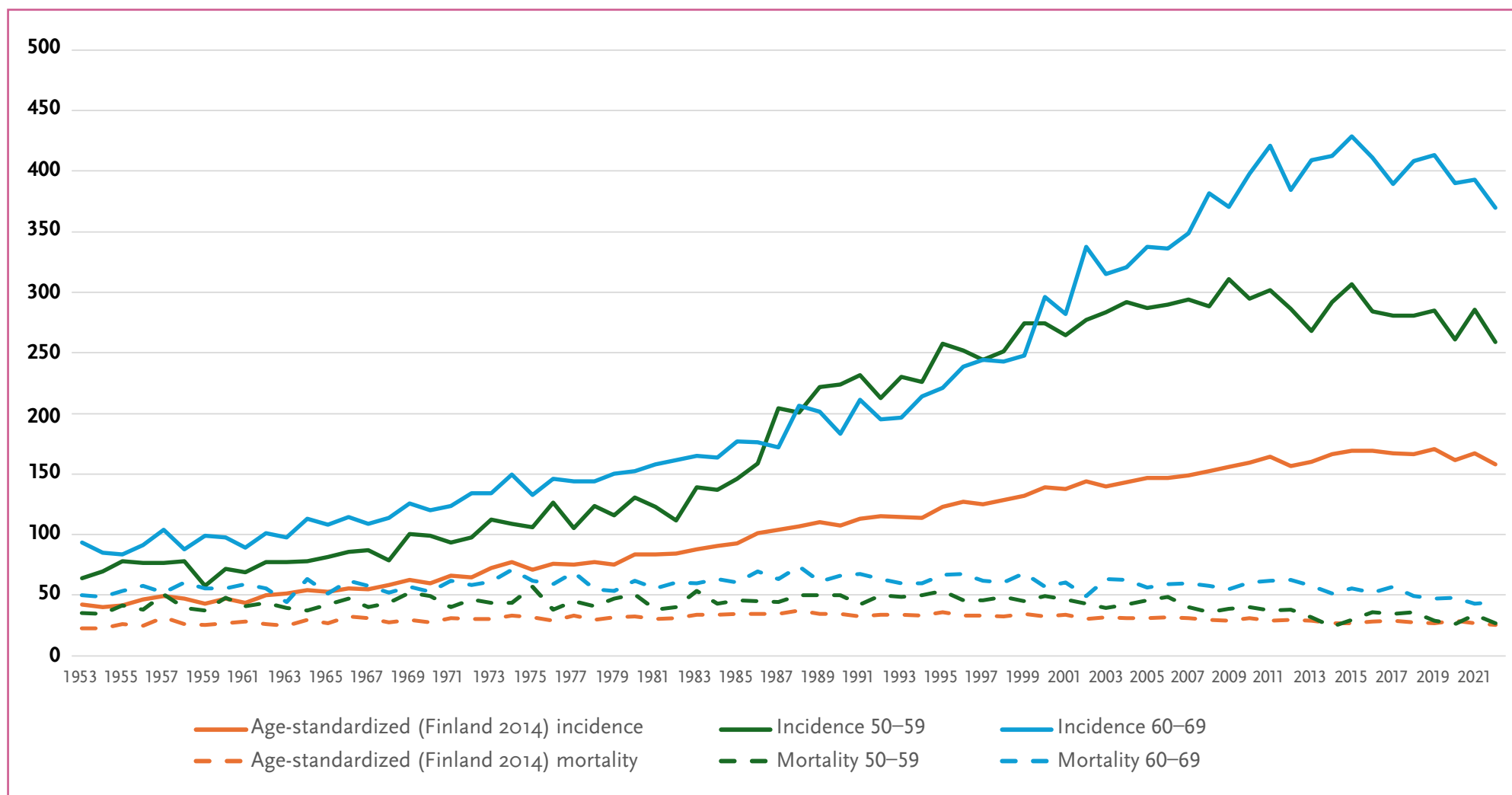
SECTION 3: DETECTION MODE AND INCIDENCE OF CANCER

FIGURE 6. Breast cancer detection mode in 2018–2022.



- Between 2018 and 2022, around 12% of cancers were detected before the screening age, 51% in people of screening age and 37% in people above screening age.
- Of cancers in screening age, the screening programme detected 62%, 13% in screening non-participants and 25% in periods between screenings.

FIGURE 7. Age-standardised breast cancer incidence and mortality in women in Finland 1953–2022.



- The age-standardised incidence of breast cancer has increased significantly over the decades, but during the 2010s, the incidence started to level off.
- Mortality increased slowly until the early 1990s but has since declined slowly.

GLOSSARY

Breast cancer

Invasive breast tumour (ICD-10: C50).

Carcinoma in situ (CIS)

A tumour in which malignant cells have not penetrated deeper into the breast tissue but occur within the duct or lobule (ICD-10: D05).

Incidence

The number of new cancer cases per population at risk, or per person-time of the population at risk, during a given period.

Mammography

X-ray imaging of the breasts.

Mortality

The number of deaths in a given period relative to the population.

Recall

Follow-up examinations in breast cancer screening (also confirmatory examinations) Breast cancer screening follow-up tests include additional mammography, ultrasound, pneumocystography, ductography, and fineneedle (cell sample) and core-needle (tissue sample) examination or a combination of these.

Screening coverage

Proportion of the target population invited for screening (invitation coverage) or percentage of the target population screened (test coverage).

DATA SOURCE AND DEFINITIONS

This annual report is based on screening data reported to the Finnish Cancer Registry by October 18, 2024. The classification of findings uses only data from the screening registry, meaning the figures do not include tests taken outside the screening program or cancers and their precursors registered in the cancer registry. Statistics production utilized identifiable data on education provided by Statistics Finland under permit TK/2743/07.03.00/2023.

Education categories were created by combining the categories of pre-primary, lower primary, and upper primary education into the primary education category, combining secondary education and special vocational qualifications into the secondary education category, and combining lower and upper tertiary education and doctoral education into the tertiary education category. Unknown and missing data were combined with the primary education category. The education data is from the year preceding the screening year (2021).

Native language is based on data from the Digital and Population Data Services Agency.

FURTHER INFORMATION

Breast cancer screening:

<https://cancerregistry.fi/screening/breast-cancer-screening/>

Annual statistics on breast cancer screening:

<https://stats.cancerregistry.fi/joukkistilastot/rinta.html>