

EUNICE Breast Cancer Screening Monitoring

Risultati della survey EUNICE sui programmi di screening mammografico in Europa

DENISE CASELLA¹, ANTONIO PONTI¹, LIVIA GIORDANO¹, MARIANO TOMATIS¹, ROBERTA CASTAGNO¹, ALFONSO FRIGERIO² e NEREO SEGNAI¹.

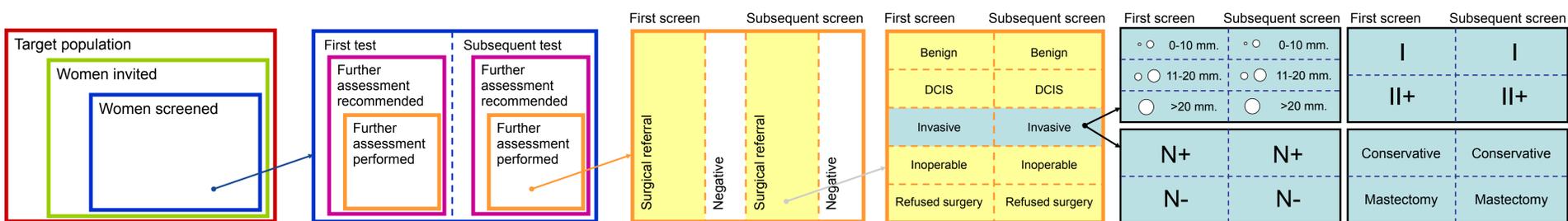
(1) CPO Piemonte - Centro di riferimento per l'epidemiologia e la Prevenzione Oncologica in Piemonte, Torino.

(2) CPO Piemonte - Centro di riferimento regionale per lo screening mammografico, Torino.

Obiettivi EUNICE (EU Network for Information on Cancer in Europe) Breast cancer screening monitoring è un applicativo *on line* che permette l'inserimento di dati aggregati di attività di screening mammografico, il calcolo degli indicatori e il confronto dei risultati con il benchmark di riferimento (regionale, nazionale o europeo).

Il progetto è stato finanziato dalla Commissione Europea. Alla riunione GISMa 2010 sono stati presentati i risultati di una sperimentazione presso alcune regioni italiane. Qui vengono presentati i risultati di una survey, condotta dall'EUNICE Working Group comprendente i rappresentanti di tutti i Paesi coinvolti, in merito all'estensione dello screening e ad alcuni parametri di processo dei programmi europei.

Materiali e metodi A tutti i 27 Paesi membri dell'Unione Europea è stato reso accessibile il database web (la cui struttura è riportata nell'immagine sottostante), con la relativa documentazione, chiedendo di compilare le schede relative alle diverse fasi dello screening a proposito di un periodo variabile dal 2005 al 2007.



La sezione 1 raccoglie i dati sulla popolazione bersaglio, gli inviti effettuati e le pazienti che hanno aderito allo screening.

Suddividendo i test in primi esami e successivi, la sezione 2 raccoglie i dati sugli ulteriori accertamenti prescritti e quelli cui le pazienti hanno aderito.

La sezione 3 approfondisce gli esami effettuati, raccogliendo il numero di test conclusi con indicazione chirurgica.

La sezione 4 raccoglie i dati relativi alle diagnosi istopatologiche delle lesioni operate.

Le sezioni dalla 5 alla 8 approfondiscono i dati relativi ai tumori, raccogliendo informazioni sulle loro dimensioni, sullo stato linfonodale, lo stage e il tipo di intervento (conservativo o mastectomia).

Risultati Hanno risposto alla survey 10 programmi nazionali e 16 programmi regionali di screening, per un totale di 18 Paesi e per una popolazione complessiva di 27 milioni di donne (50-69 anni). Di seguito il valore di alcuni indicatori con il *range* tra i programmi. Una parte di questi risultati sono pubblicati in esteso nel Supplemento 1, 2012 del *Journal of Medical Screening*.

Mammographic screening programmes in Europe: organization, coverage and participation

Livia Giordano, Lawrence von Karsa, Mariano Tomatis, Ondrej Majek, Chris de Wolf, Lesz Lancucki, Solveig Hofvind, Lennarth Nyström, Nereo Segnan, Antonio Ponti and The Eunice Working Group (Eunice Working Group members are listed at the end of the paper)

Coverage by invitation and examination in 26 European breast screening programmes

Country or region	Period (year)	Target population of women (N)*	Personal invitations (N)*	Examinations (N)*	Annual target population (N)*	Annual examinations (N)*	Annual examinations (%)	Invitation coverage (%)	Examination coverage (%)
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
Belgium, Flanders	2005	717,856	295,150	134,356	358,928	295,150	134,356	82.2	37.4
Czech Republic*	2005-2007	1,351,706	NA	831,778	675,853	0	277,259	-	41.0
Denmark, Copenhagen	2005	54,351	17,559	12,678	27,176	17,559	12,678	64.6	46.7
Estonia (50-59)	2005-2006	96,236	75,372	37,667	48,118	37,666	18,834	78.3	39.1
Finland	2005	688,778	242,796	211,183	344,389	242,796	211,183	70.5	61.3
Germany, pilot projects [§]	2001-2004	153,667	152,371	80,388	76,834	50,571	26,680	65.8	34.7
Hungary (45-65)	2005-2007	1,512,324	1,721,707	658,218	756,162	573,902	219,406	75.9	29.0
Italy	2005	7,240,570	1,843,119	1,027,964	3,620,285	1,843,119	1,027,964	50.9	28.4
Luxembourg	2004-2005	47,870	44,958	28,017	29,935	22,479	14,009	93.9	58.5
Norway	2005-2006	513,998	484,030	370,778	256,999	242,015	185,389	94.2	72.1
Poland	2005	4,747,156	2,734,513	935,416	2,373,578	2,734,513	935,416	115.2	39.4
Portugal, Centre	2005	19,3378	94,131	58,447	96,689	94,131	58,447	97.4	60.4
Portugal, North (45-69)	2005	115,308	46,261	31,123	57,654	46,261	31,123	80.2	54.0
Republic of Ireland, East (50-64)	2005-2006	179,910	157,105	123,011	89,555	78,553	61,506	87.3	68.4
Spain, Asturias	2005	134,280	54,905	40,136	67,140	54,905	40,136	81.8	59.8
Spain, Balearas (50-64)	2005	70,642	19,198	13,018	35,321	19,198	13,018	54.4	36.9
Spain, Galicia (50-66)	2005-2006	258,375	218,542	172,341	129,188	109,271	86,171	84.6	66.7
Spain, Navarra	2005	59,574	61,716	41,879	54,879	27,437	103.6	92.1	78.0
Spain, Pais Vasco (50-64)	2005	206,452	98,044	74,636	103,226	98,044	74,636	95.0	72.3
Spain, Valencia	2005-2006	433,368	44,1758	320,268	216,684	220,879	160,134	101.9	73.9
Sweden, Södermanland	2005	343,25	14,516	12,192	17,163	14,516	12,192	84.6	71.0
Sweden, Stockholm	2005	215,440	102,887	71,972	107,720	102,887	71,972	95.5	66.8
Sweden, Västanland	2005	29,424	12,138	14,712	13,779	12,138	93.7	82.5	78.0
Switzerland, Fribourg	2005	29,480	13,073	6886	14,740	13,073	6886	88.7	46.7
The Netherlands	2005	1,861,200	881,862	728,151	930,600	881,862	730,263	94.8	78.5
UK, England**	2005-2007	3,114,205	4,088,143	3,032,433	2,044,072	1,956,606	1,557,103	102.4	78.0
Total		26,935,485	13,917,495	9,163,952	12,469,440††	9,882,079††	6,006,334††	79.3	48.2

NA, not available
*The data and rates in columns [3] to [10] refer to the reference period indicated in column [2] and the age range 50-69 years, unless a different age range is indicated in column [1]
†Calculations: ANNUAL target population [6] = [3] no. of years in screening interval reported in Table 1; Annual examinations [7] = [4] no. of years in [2]; Invitation coverage [9] = [7]/[6]; Examination coverage [10] = [8]/[6]
‡A pilot study was conducted in 2007-2008 with personal invitation of nonparticipating women
§Age rates shown are based on data from the first screening round, 07/2001-09/2004 in Bremen and Weisbaden, 05/2002-09/2004 in Weiser Ems. Cumulative rates for round 1 are 99.2% (invitation coverage) and 52.3% (examination coverage)
¶July 2005-June 2007
††Totals do not add up due to rounding of country data to the nearest digit

Participation rates in 25 population-based European breast screening programmes

Country or region	Period (year)	Personal invitations (N)*	Examinations (N)*	Annual invitations (N)*	Annual examinations (N)*	Participation (%)
[1]	[2]	[3]	[4]	[5]	[6]	[7]
Belgium, Flanders	2005	295,150	111,794	295,150	111,794	37.9
Denmark, Copenhagen	2005	17,559	12,989	17,559	12,989	74.0
Estonia (50-59)	2005-2006	75,372	37,667	37,666	18,834	50.0
Finland	2005	242,796	211,183	242,796	211,183	87.0
Germany, pilot projects [§]	2001-2004	152,371	80,388	50,571	26,680	52.8
Hungary (45-65)	2005-2007	1,721,707	658,218	573,902	219,406	38.2
Italy	2005	1,843,119	1,044,338	1,843,119	1,044,338	56.7**
Luxembourg	2004-2005	44,958	28,017	22,479	14,009	62.3
Norway	2005-2006	484,030	370,778	242,015	185,389	76.6
Poland	2005	2,734,513	935,416	2,373,578	935,416	19.4
Portugal, Centre	2005	94,131	58,447	94,131	58,447	62.1**
Portugal, North (45-69)	2005	46,261	31,123	46,261	31,123	67.3**
Republic of Ireland, East (50-64)	2005-2006	157,105	123,011	89,555	61,506	78.3
Spain, Asturias	2005	54,905	40,136	54,905	40,136	73.1
Spain, Balearas (50-64)	2005	19,198	13,018	19,198	13,018	67.8**
Spain, Galicia (50-66)	2005-2006	218,542	172,341	129,188	86,171	78.9**
Spain, Navarra	2005-2006	61,716	54,879	30,858	27,437	88.9**
Spain, Pais Vasco (50-64)	2005	98,044	74,636	74,636	74,636	76.1
Spain, Valencia	2005-2006	44,1758	320,268	220,879	160,134	72.5**
Sweden, Södermanland	2005	14,516	12,192	14,516	12,192	84.0
Sweden, Stockholm	2005	102,887	71,972	102,887	71,972	70.0
Sweden, Västanland	2005	12,138	14,712	13,779	12,138	88.1
Switzerland, Fribourg	2005	13,073	6886	13,073	6886	52.3
The Netherlands	2005	881,862	728,151	881,862	728,151	82.6**
UK, England**	2005-2007	4,088,143	3,032,433	2,044,072	1,557,103	74.2**
Total		13,917,495	9,163,952	9,882,079††	5,273,987††	53.4

NA, not available
*The data and rates in columns [3] to [7] refer to the reference period indicated in column [2] and the age range 50-69 years, unless a different age range is indicated in column [1]
†No. of screening examinations reported in column [4] differs from respective number reported in Table 1 for programmes that used invitation cohort method (Belgium, Flanders; Denmark, Copenhagen; Italy; Poland; Switzerland; Fribourg; The Netherlands; UK, England). For explanation see Methods section
‡Calculations: Annual invitations [5] = [3] no. of years in [2]; Annual examinations [6] = [4] no. of years in [2]; Participation [7] = [6]/[5]
§Age rates shown are based on data from the first screening round, 07/2001-09/2004 in Bremen and Weisbaden, 05/2002-09/2004 in Weiser Ems
¶Participation after invitation to attend screening for the first time Italy: 40.7%; Portugal centre: 36.4%; Spain, Balearas 72.0%; Galicia: 76.2%; Navarra: 56.4%; Valencia: 80.3%; The Netherlands: 78.7%; UK, England: 69.4%
**July 2005-June 2007
††Totals do not add up due to rounding of country data to the nearest digit

Number of screening examinations in women aged 50-69 who were screened within 2005-2007 in European mammographic screening programmes, rate (%) of further assessment (FA), preoperative needle biopsy and surgical intervention (all and with benign outcome, including all surgical procedures performed as a consequence of a positive screening test) among those screened, positive predictive value (PPV) of the screening test and benign-to-malignant (B/M) ratio of surgical biopsies, by screening history (initial and subsequent screening test) and area

Country or region	Period	Initial screening test						Subsequent screening test							
		Screening exams (n)	FA (%)	Needle biopsy (%)	All (%)	Ben* (%)	PPV* (%)	B/M* (ratio)	Screening exams (n)	FA (%)	Needle biopsy (%)	All (%)	Ben* (%)	PPV* (%)	B/M* (ratio)
Belgium Flanders	2005	47,104	6.2	-	0.8	0.13	10.7	0.20	87,252	3.5	-	0.5	0.06	14.0	0.12
Czech Republic	2005-2006	256,425	15.6	1.1	0.7	-	-	-	234,900	10.5	0.6	0.4	-	0.7	0.06
Denmark	2005	2910	4.3	-	1.3	0.27	24.2	0.27	10,079	2.0	-	1.1	0.07	49.5	0.07
Denmark, Copenhagen	2005	29,935	2.2	-	0.9	0.4	0.06	15.6	0.18	-	-	-	-	-	-
Estonia	2005-2006	20,555	2.2	0.9	0.4	0.06	15.6	0.18	-	-	-	-	-	-	-
Finland	2005	13,841	10.2	-	0.8	-	-	-	44,606	2.4	-	0.6	0.09	17.1	0.20
Hungary	2005	15,631	7.0	2.2	0.8	0.12	7.3	0.23	27,060	5.2	1.5	0.6	0.05	8.2	0.12
Hungary, Budapest†	2005	15,631	7.0	2.2	0.8	0.12	7.3	0.23	27,060	5.2	1.5	0.6	0.05	8.2	0.12
Italy	2005	170,427	7.2	1.2	0.8	0.16	7.5	0.29	576,207	4.4	0.9	0.6	0.10	11.2	0.21
Luxembourg	2004-2005	5094	14.1	-	0.9	0.22	4.9	0.31	22,923	5.3	-	0.7	-	12.4	0.09
Norway	2005-2006	76,058	5.7	2.1	0.7	0.12	9.7	0.22	283,184	3.1	1.1	0.6	0.06	18.0	0.12
Poland	2007	403,596	10.6	-	1.3	-	-	-	531,820	7.1	-	0.8	-	-	-
Portugal centre	2005	13,841	10.2	-	0.8	-	-	-	44,606	2.4	-	0.4	-	-	-
Portugal north	2005	12,299	7.1	-	0.7	-	-	-	12,209	1.9	-	0.3	-	-	-
Republic of Ireland	2005-2006	38,170	5.6	-	1.0	0.25	12.9	0.35	84,841	2.0	-	0.5	0.06	21.7	0.13
Ireland**	2005-2006	30,969	4.5	0.8	0.5	0.15	6.8	0.47	141,372	1.3	0.3	0.3	0.04	17.1	0.18
Spain Galicia††	2005-2006	734	13.9	2.2	1.4	0.41	6.9	0.43	54,139	3.8	0.6	0.5	0.04	10.8	0.11
Spain Navarra	2005-2006	15,826	12.6	1.7	1.0	0.26	5.7	0.36	304,442	5.3	0.6	0.4	0.06	6.8	0.16
Sweden, Stockholm	2005	8102	4.8	-	0.7	0.17	10.2	0.35	63,870	2.6	-	0.8	0.10	25.4	0.14
Switzerland	2005	5790	7.4	-	1.3	0.50	10.3	0.66	-	-	-	-	-	-	-
Switzerland, Fribourg	2005	62,025	2.7	1.2	-	-	19.9	-	668,238	1.2	0.7	-	-	36.5	-
The Netherlands	2005	531,870	8.3	3.3	1.0	0.21	9.7	0.26	2,582,335	3.7	1.5	0.9	0.07	21.6	0.09
UK England†††	2005-2007	1,717,426	9.2												