

유방암 검진의 세계적 추세

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유방암 검진의 세계적 추세를 이해하기 위하여는 IBSN의 활동을 이해하는 것이 가장 지름길일 것이다. 왜냐하면 The International Breast Cancer Screening Network(IBSN)은 국가적으로 유방암검진이 시행되고 있는 나라들의 자발적인 컨소시엄이기 때문이다.

US National Cancer Institute의 Applied Research program에 의해 관리되는 이 컨소시엄은 1988년 10월 11개국 대표들이 참가한 국제 워크샵기간 중 국제적 유방암검진 데이터베이스 프로그램 사업(International Breast Cancer Screening Database Project)으로 시작되었다. 이 컨소시엄은 이후 성장하여 25개국이 참여하게 되었고 2년마다 회의를 개최한다. 그 사이에 특별한 활동들이 working group들을 통해 이루어진다. IBSN의 초기 목적은 Screening mammography program들을 평가하기 위한 데이터베이스를 구축하는 것이었는데 1997에 공통적인 데이터베이스 생산에서 다음과 같은 사항에 공동의 노력

을 요하는 것으로 초점이 바뀌었다.

1. 국제적인 screening mammography program들로부터 데이터를 비교하고 사용하는 방법에 대한 이해.
2. 인구집단을 근거로 한 유방암검진 프로그램의 효과를 평가하는 방법을 개발.

이러한 목적을 견지한 채 1997 Internal Breast Cancer Screening Network 로 이름을 바꾸었다. IBSN은 인구집단을 대상으로 시행되는 유방촬영술을 통해 유방암에 대해 전세계적인 규모로 효율적이고 효과적인 접근을 육성하고 규명하는 것을 목표로 하고 있다. 이를 위하여 공동 조사 작업을 수행한다. IBSN은 인구집단을 대상으로 유방촬영 검진 프로그램을 시행하려는 모든 나라에 참여의 문이 열려있다. 우리나라도 지난 2004년에 가입하였다.

IBSN의 website에 실려있는 자료를 소개함으로써 강의초록에 대신하고자 한다.

Table 1. Organization of Population-Based Breast Cancer Screening Programs in 22 Countries Surveyed in 1995

Country	Year Organized* Program Began	% Target Population Covered by Organized* Programs	Year National Coverage Expected	Type** of System	Facilities Used***	Major Source of Funding for MM in Program
IBSN Program Countries						
Australia	Natl 1991	75 - 100	1996	PC	MC,GR,M	G ¹
Canada	Natl 1988	<25	Not planned	DC	MC,GR,M	G
Finland	Natl 1989	100	1989	C	MC	G
Iceland	Natl 1987	100	1989	C	MC,GR,M	G
Israel	Natl 1995	70	1997/1998	C	MC	G, HMO ²
Italy	Reg 1990	<25	Not planned	DC	MC	G
Hungary	Not begun	NA ³	2010	NA	MC,GR	G
Japan	Natl 1987 CBE	8	2000 (MM)	C	MC	G
The Netherlands	Natl 1988	76 - 100	1997	PC	MC,M	G
Sweden	Natl 1986	100	1997	PC	MC	G
United Kingdom	Natl 1988	100	1996	PC	MC,M	G
United States	Natl 1991	25-50	Not planned	PC	MC,GR,M	G
Uruguay	Not begun	<25	Not planned	NA	MC	NA
European Network Pilot Projects						
Belgium	Reg 1992	<25	Not planned	DC	MC,GR	G
Denmark	Reg 1992	<25	Not planned	PC	GR	G
France	Reg 1989					Natl Health Assurance
	Natl 1994	30 - 40	Not planned	DC	GR	
Germany ⁴	Not begun	NA	Not planned	NA	NA	EAC ⁵
Greece ⁶	Reg 1989/91	60; <25 Natl	Not planned	DC	MC,GR,M	EAC
Ireland	Reg 1989	<25	2000	PC	MC,M	
Luxembourg	Natl 1992	36	Not planned	C	GR	Union of Sickness
Portugal	Reg 1990	25 - 50	Not planned	PC	MC,M	G
Spain	Reg 1989	<25	Not planned	NA	MC,M	G

Data reflects information from organized screening programs. However, data for the United States reflects government sponsored programs supporting screening for low income women and the voluntary Medicare benefit for women 65 years of age and over.

* In second column refers to national (Natl) and regional (Reg) programs. In third column refers to percentage of the national population covered by national programs if available and by regional programs if no national program was established by 1995.

** C represents centralized systems that have a national policy and administration of programs, and national or both national and regional funding. PC represents partially centralized systems that have the same characteristics as centralized systems except that programs are administered regionally. DC represents decentralized systems that have a national policy, but regional funding and administration.

*** Facilities used for the delivery of mammograms in organized programs: MC = dedicated mammography screening centers; GR = nondedicated centers, such as general radiology departments; M = mobile units.

¹ G = Government.

² HMO = Health maintenance organization.

³ NA = Not applicable.

⁴ Describes plans in Germany as of 1995 which were not further implemented.

⁵ EAC = Europe Against Cancer.

⁶ Greece has two programs. In one, termed Greece I (the Hellenic Society of Oncology), the program began in 1989, currently has a 60% participation for women 40 - 64 in its region, and uses only mobile units dedicated to screening. In the other, termed Greece II, the program began in 1992, does not have an estimate for participation within its region, and uses both mammography centers and general radiology departments as facilities for screening.

Table 2. Characteristics of Breast Cancer Screening Programs in 19 IBSN Countries Responding to a Survey in 2002

Region/Country	Program Type	Year Program Began	Detection Methods ¹	Age Groups Covered by Mammography	Screening Interval-Years	
					Age 40 - 49	Age 50+
Europe						
Denmark	State/provincial/regional	1991	MM	50 - 69	NA ²	2
France	National,					
	with regional implementation	1989	MM; CBE	50 - 74	NA	2
Iceland	National	1987	MM; CBE	40 - 69	2	2
Italy	National,					
	with regional implementation	2000	MM	50 - 69	NA	2
Luxembourg	National	1992	MM	50 - 69	NA	2
Netherlands	National	1989	MM	50 - 74	NA	2
Norway	National	1996	MM	50 - 69	NA	2
Portugal	State/provincial/regional	1990	MM; CBE; BSE	45 - 64	2	2
Spain	State/provincial/regional	1990	MM	45 - 69	2	2
Sweden	State/provincial/regional	1986	MM	40 - 74 ³	1.7	2
Switzerland	State/provincial/regional	1999	MM	50 - 69	NA	2
United Kingdom	National	1988	MM	50 - 64	NA	3
North America						
Canada	National,					
	with provincial implementation	1988	MM; CBE ⁴	50 - 69	NA	2
United States	Mammography registry system	1995	MM; CBE	40+	1-2	1-2
South America						
Uruguay	National	1990	MM; CBE; BSE	40 - 64	1	1
Middle East						
Israel	National	1997	MM	50 - 74	NA	2
Asia/Pacific						
Australia	National,					
	with state implementation	1991	MM	50 - 69	NA	2
Japan	National	2002	MM; CBE	50 - 69	NA	2
New Zealand	National	1998	MM	50 - 64	NA	2

¹Mammography (MM), Clinical Breast Examination (CBE), Breast Self-examination (BSE).²NA = Not Applicable.³In half of the counties, the lower age limit is 40 years. In the other half, it is 50 years.⁴In 5 of 12 programs.

Table 3. Policies on Number of Views and Double-Reading for Population-Based Mammography Screening Programs in 21 Countries in 1995

Country	Number of Views		Double Reading	If Discordant, Resolve by
	Age <50	Age 50+	Routine (Independent)	
Established Programs				
Australia	2, initial only	2, all screens	Yes (I)	Consensus
Canada	2, all screens ²	2, all screens	No	NA
Finland	NA	2, all screens	Yes (I)	Consensus
Iceland	2, all screens ³	2, all screens ³	Yes	Choose suspicious for malignancy
Israel	NA	2, all screens	No	NA
Italy	NA	2, initial only	Yes	Consensus
Hungary	2, all screens	2, all screens	Yes (I)	Consensus
Japan ¹	1	1	Yes (I)	Choose suspicious for malignancy
The Netherlands	NA	2, initial only	Yes (I)	Consensus
Sweden	1 or 24	2, initial only	Yes (I)	Consensus
United Kingdom	NA	2, initial only	No	NA
United States	2, all screens	2, all screens	No	NA
Uruguay ¹	2, all screens	2, all screens	No	NA
European Network Pilot Programs				
Belgium	NA	2, all screens	Yes (I)	Third expert
Denmark	NA	13	Yes (I)	Consensus
France	NA	1	Yes (I)	Third expert
Greece	2, initial and all ⁵	2, initial and all	Yes (I)	Consensus
Ireland	NA	2, initial only	No	NA
Luxembourg	NA	2, all screens	Yes (I)	Consensus
Portugal	2, initial only	2, initial only	No	NA
Spain	2, initial only	1	No	NA

NA = Not applicable.

1 Population-based screening programs in Japan and Uruguay do not include screening mammograms, but mammography practices for these countries are noted.

2 Only in British Columbia.

3 Two views at the prevalent screen; one view for less dense breasts at subsequent screens (10-15% of examinations).

4 Decisions on number of views made by radiologist at each screening.

5 Two pilot programs contributed data and indicated difference in number of views for incident screen.