

Workshop

"PROGRAMMA REGIONALE DI SCREENING MAMMOGRAFICO PREVENZIONE SERENA" Workshop 2015

DIRETTORE: Antonio Ponti

Responsabili scientifici: Alfonso Frigerio, Livia Giordano, Maria Piera Mano, Antonio Ponti

Torino 2 dicembre 2015

**AULA MAGNA DOGLIOTTI - A.O.U. Citta' della Salute e della Scienza di Torino
Presidio Molinette - Corso Bramante, 88 - 10126 TORINO
(Codice inserimento E.C.M. 300 - 22156)**

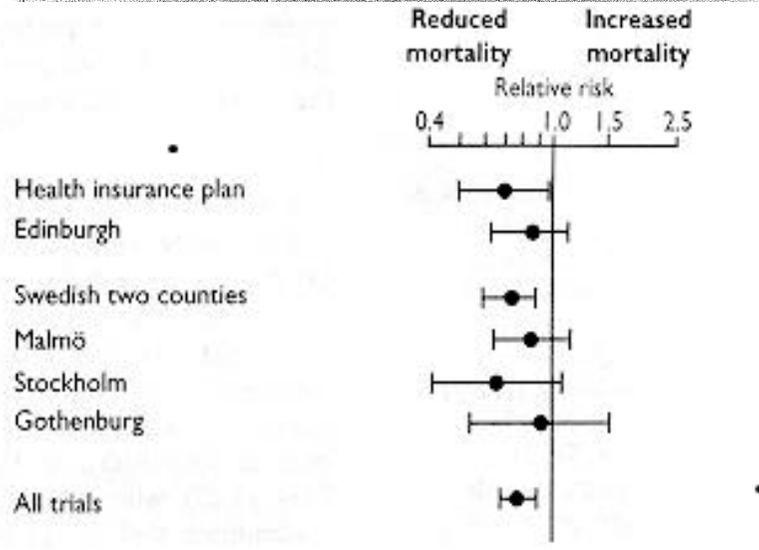
**Come e perché lo screening mammografico oggi :
aggiornamento sulla evidenza di efficacia e sulle
linee guida.**

**Eugenio Paci,
Epidemiologo Firenze**



Breast Cancer Screening

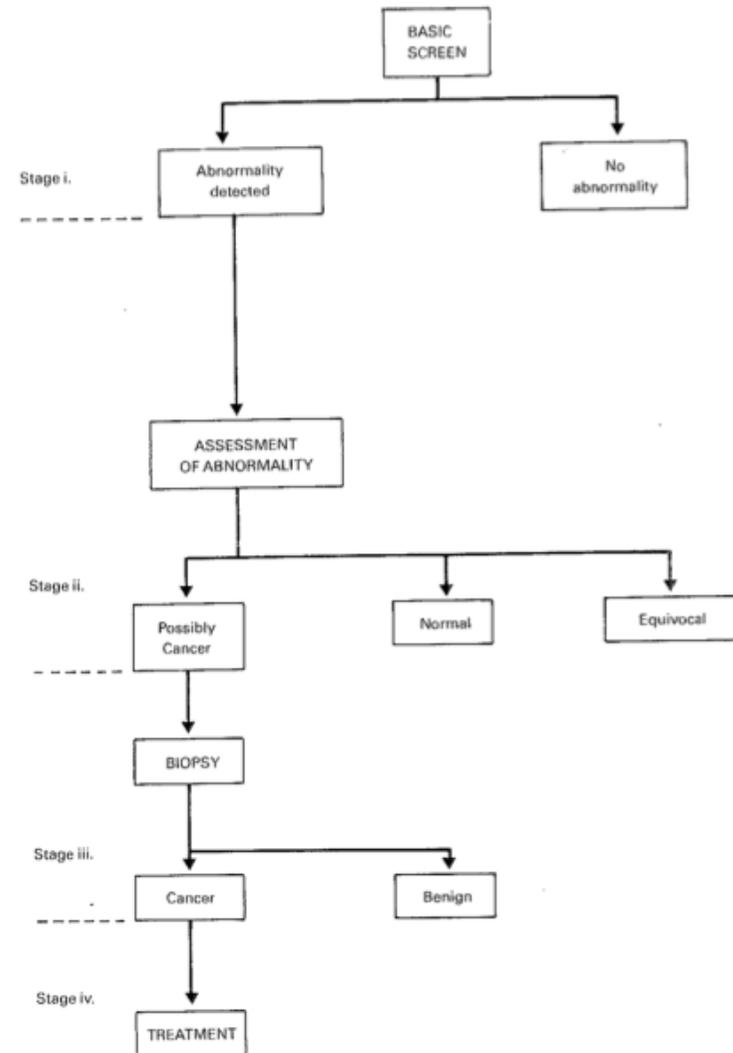
Report to the Health Ministers



1985-86

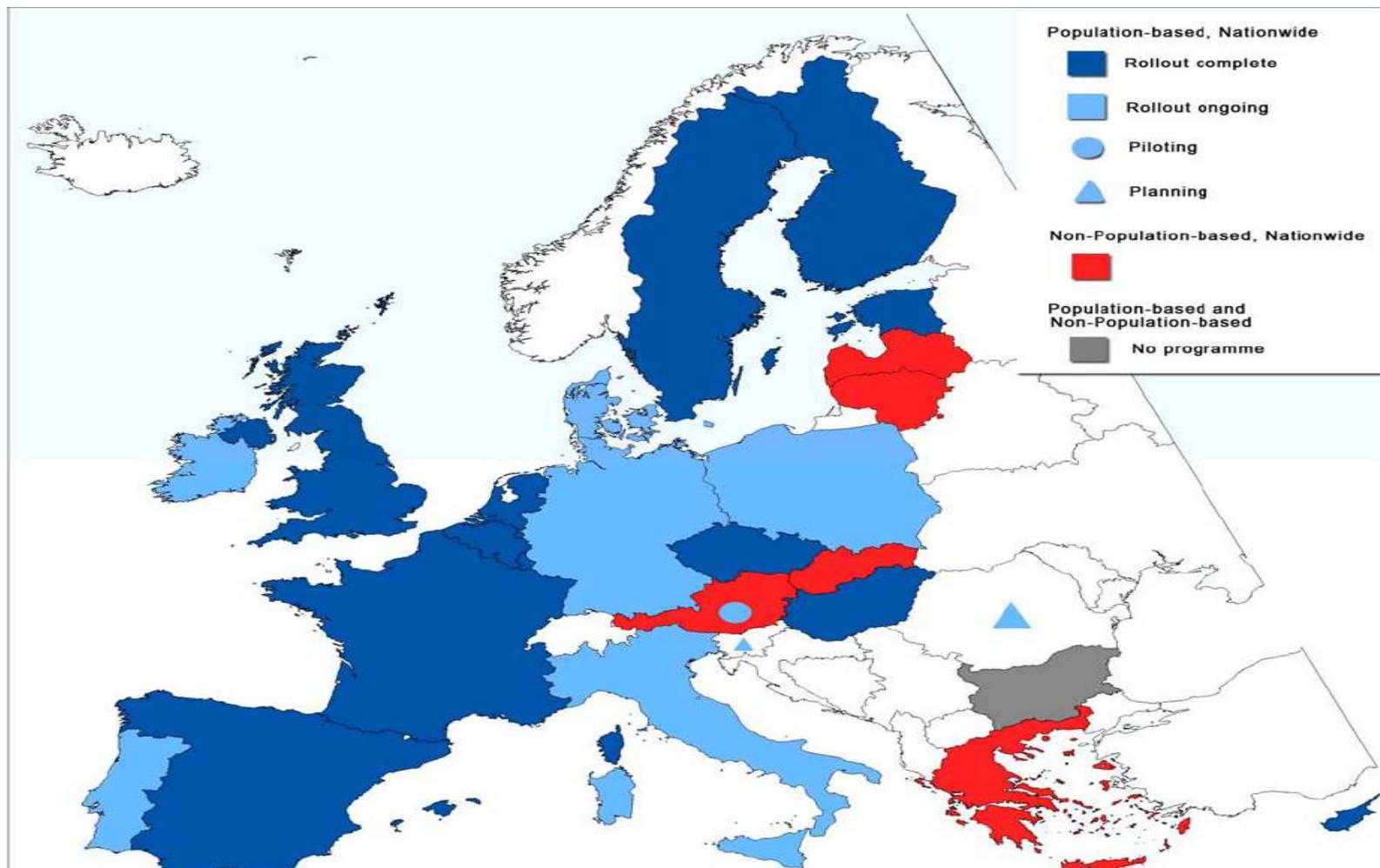
Figure 3.1

Screening Procedure



- Notes: a) If the basic screen is single-view mammography stage i may include additional mammographic views.
 b) Women with equivocal assessment results are kept under surveillance by the assessment team.
 c) Normal at stage ii includes benign lesions considered insignificant.

Distribution of Breast Cancer Screening Programmes Based on Mammography in the EU in 2007



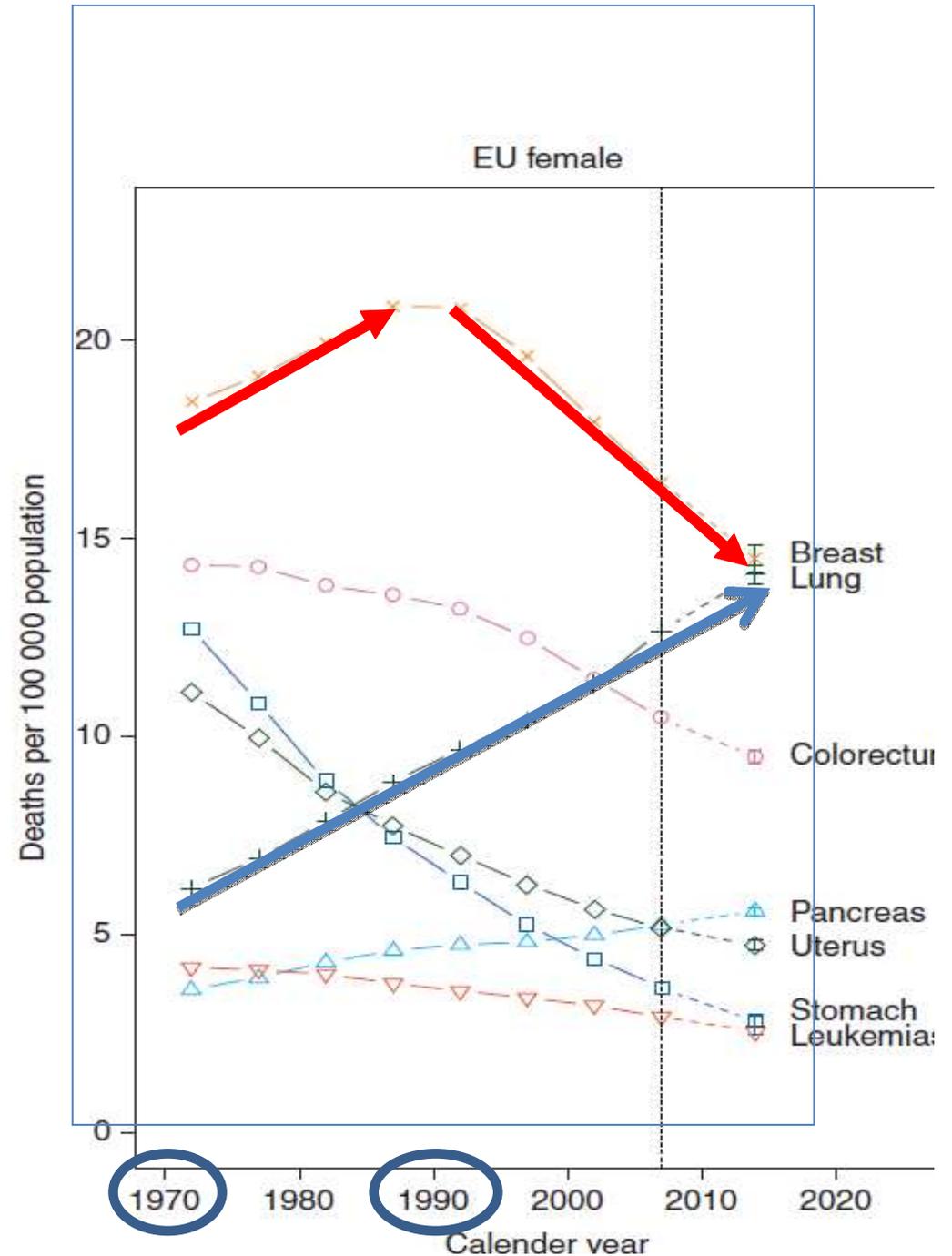
26 paesi europei, 18 hanno fornito dati per la Survey EUNICE survey (2012)
26.9 milioni di donne sono invitate allo screening organizzato , soprattutto in età tra I 50 e I 69.

European cancer mortality predictions for the year 2014

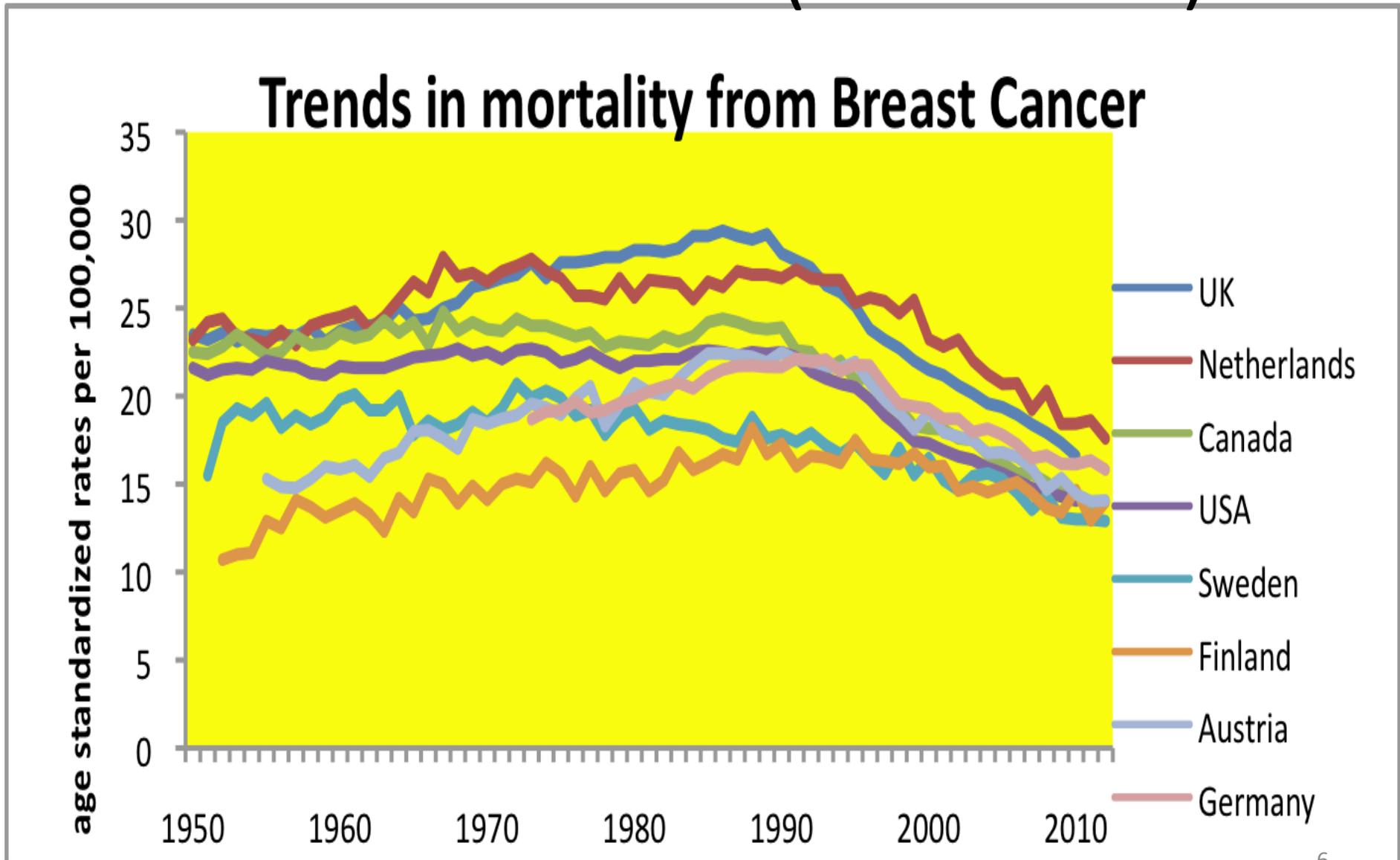
M. Malvezzi^{1,2}, P. Bertuccio¹, F. Levi³, C. La Vecchia^{2*} & E. Negri¹

¹Department of Epidemiology, IFCCS-Istituto di Ricerche Farmacologiche "Mario Negri", Milan; ²Department of Clinical Sciences and Community Health, Università Degli Studi di Milano, Milan, Italy; ³Cancer Epidemiology Unit, Institute of Social and Preventive Medicine (IUMSP), Lausanne University Hospital, Lausanne, Switzerland

- *La mortalità standardizzata per età per tumore della mammella in Europa diminuisce dal 1990.*
- *Le ragioni di questo cambiamento sono molteplici, ma soprattutto attribuite a un "effetto periodo":*
 - *Diagnosi precoce/screening*
 - *Nuovi Trattamenti*
 - *Migliore assistenza e cura*



I limiti dei trend (STD World)



Stime molto

contestate, su dati

USA!

The Cisnet Models

(Berry et al, NEJM 2005; 353: 1784-92)

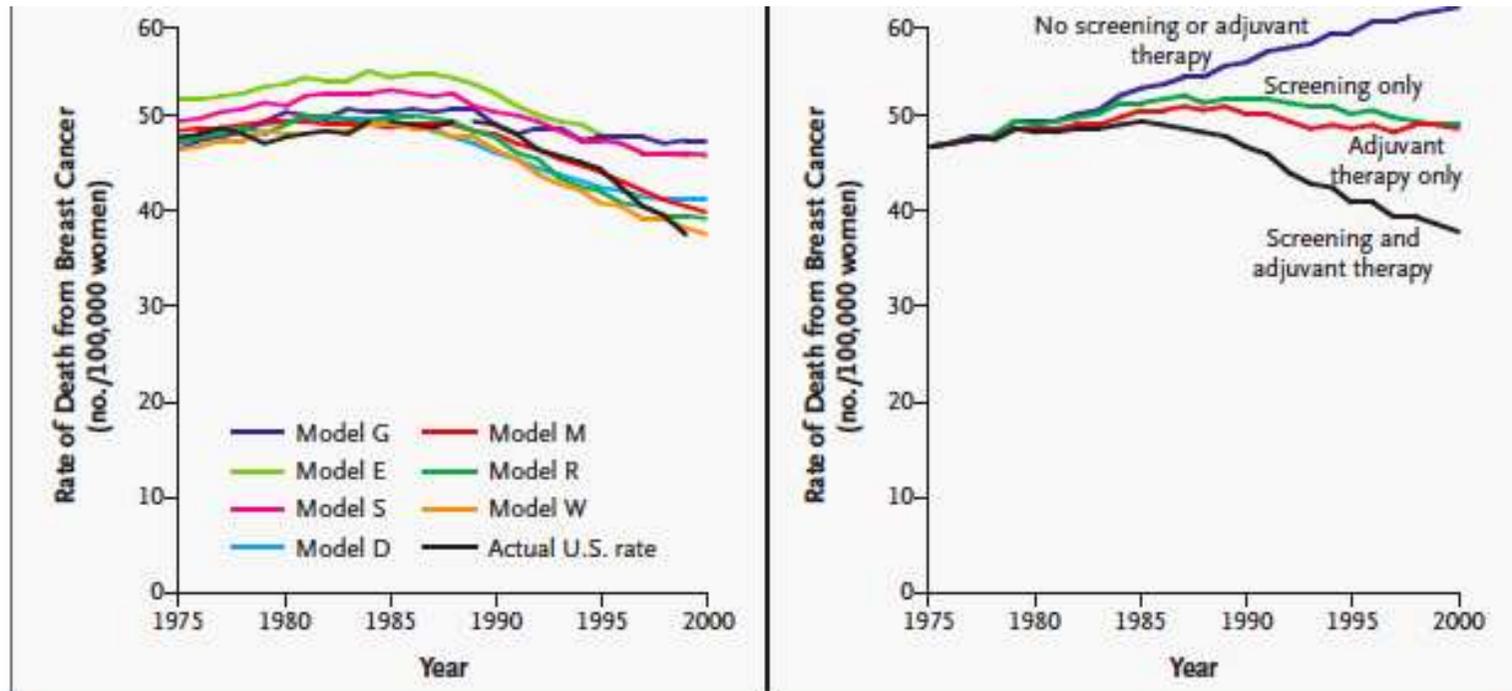
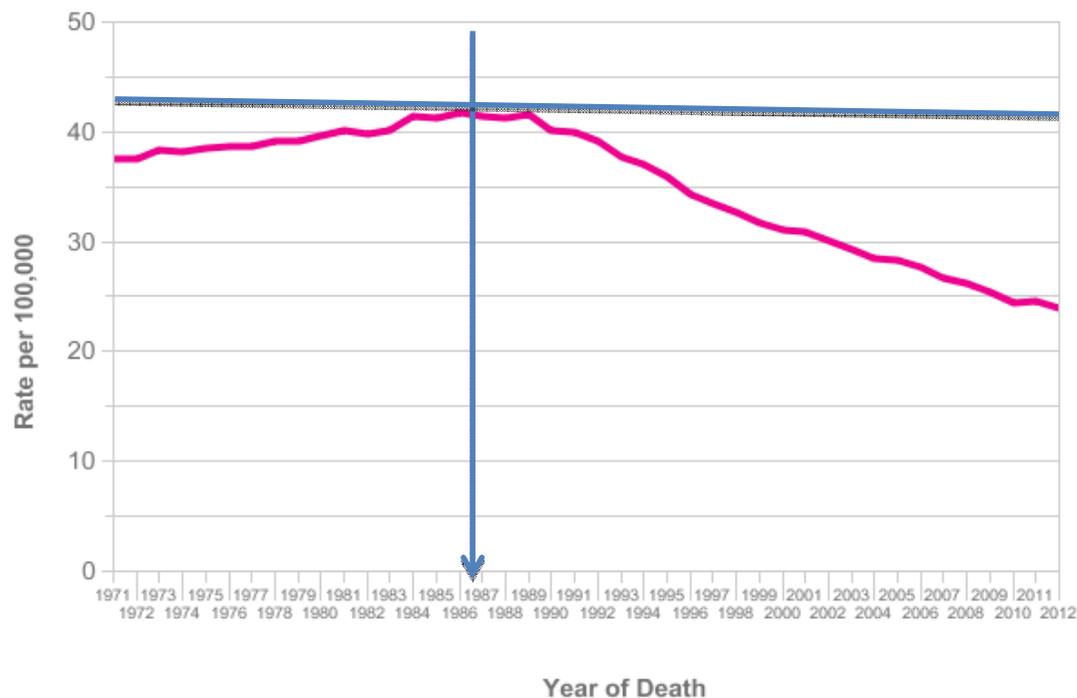


Figure 2. Estimated and Actual Rates of Death from Breast Cancer among Women 30 to 79 Years of Age from 1975 to 2000 (Panel A) and under Hypothetical Assumptions about the Use of Screening Mammography and Adjuvant Treatment (Panel B).

Panel A, which compares the model-based results with the actual rates in the United States from 1975 to 2000, shows the variability across the model estimates. Some of the models were calibrated according to the observed rate of death from breast cancer in the United States, and some were not. Panel B shows the results from model W (the University of Wisconsin–Madison) of estimated mortality trends for the four scenarios considered: no screening and no adjuvant treatment; base-case screening, but no adjuvant treatment; no screening, but base-case adjuvant treatment; base-case screening and adjuvant treatment. Rates in both panels are age-adjusted to the 2000 U.S. standard.

Breast Cancer (C50): 1971-2012
European Age-Standardised Mortality Rates per 100,000 Population, Females, UK



24.0
Per 100.000

Please include the citation provided in our Frequently Asked Questions when reproducing this chart: <http://info.cancerresearchuk.org/cancerstats/faqs/#How>
 Prepared by Cancer Research UK

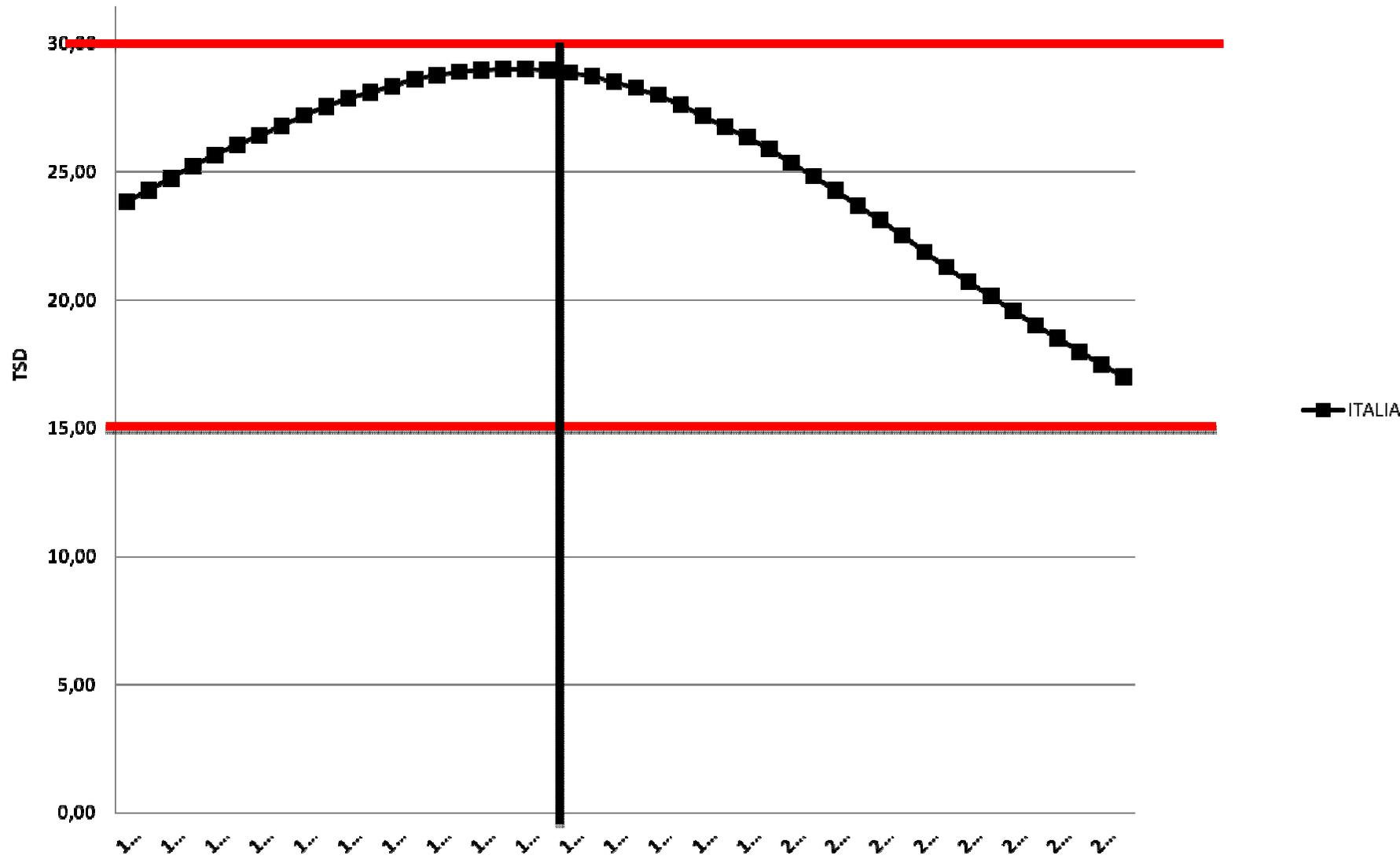
Original data sources:

1. Office for National Statistics, Mortality Statistics: Deaths registered in England and Wales
<http://www.ons.gov.uk/ons/search/index.html?newquery=series+dr>
2. General Register Office for Scotland, Deaths Time Series Data, Deaths in Scotland
<http://www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/time-series.html>
3. Northern Ireland Statistics and Research Agency, Deaths by cause
<http://www.nisra.gov.uk/demography/default.asp14.htm>

Inizio programma di screening nazionale



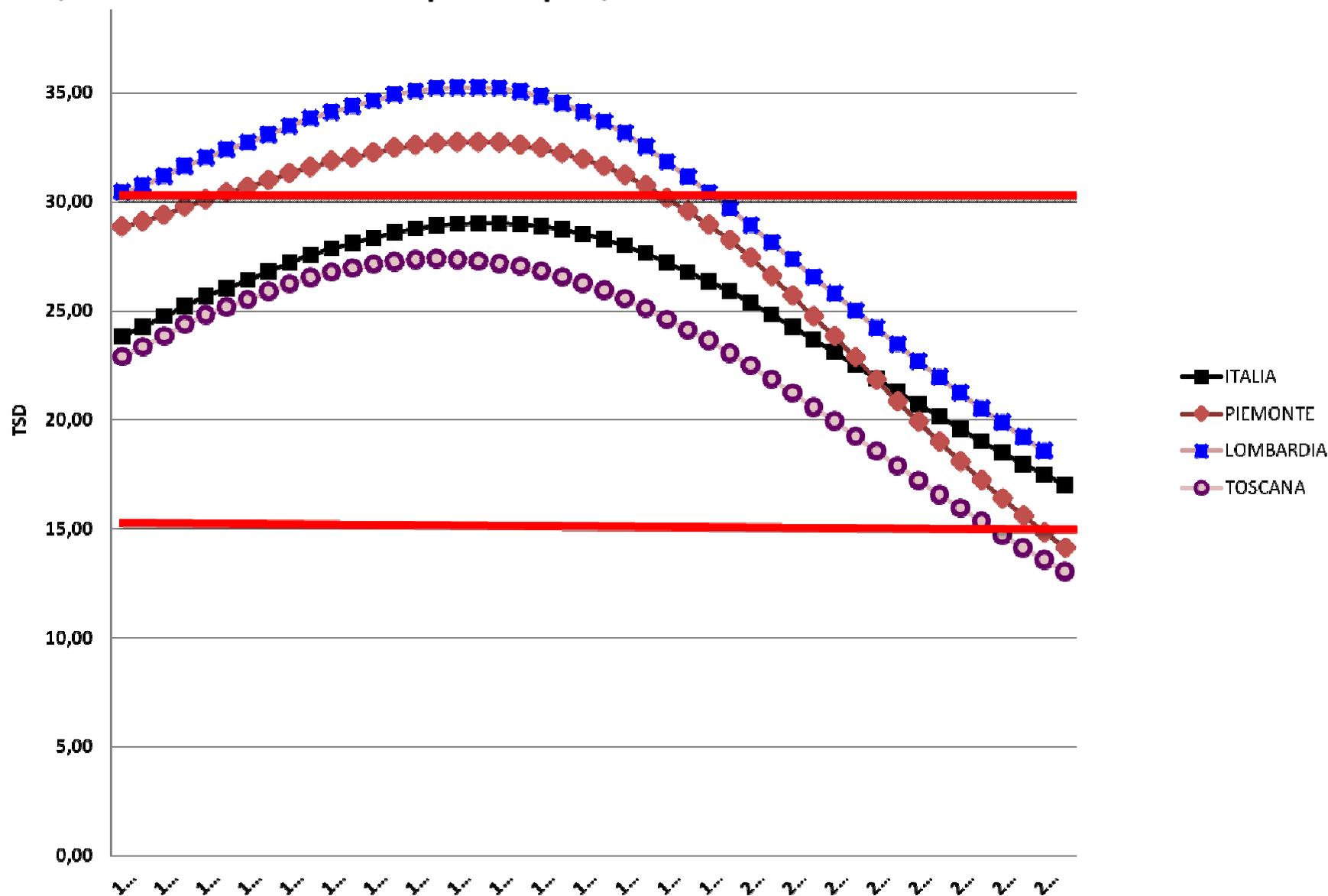
Mortalità per Tumore della mammella (C50) Età 0-99, Standardizzazione Pop. Europea, x 100.000



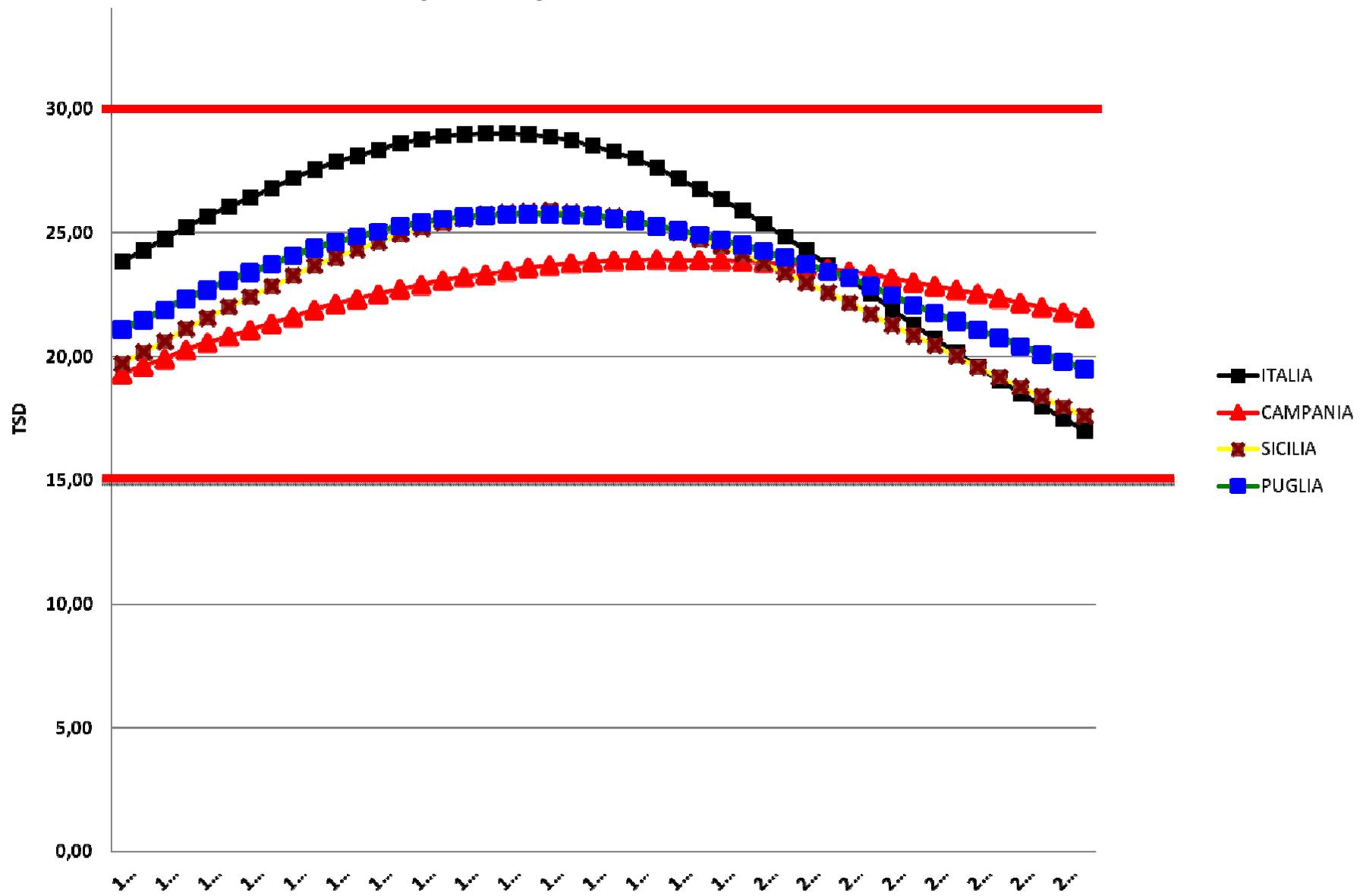
Elaborazione da Tumori.net, Ottobre 2015

Mortalità per Tumore della mammella (C50)

Età 0-99, Standardizzazione Pop. Europea, x 100.000



Mortalità per Tumore della mammella (C50) Età 0-99, Standardizzazione Pop. Europea, x 100.000



**Dal 2001 la polemica sullo screening
mammografico ei programmi di screening.
Notevole l'impatto mediatico.**

Screening for breast cancer with mammography.
Olsen O, Gøtzsche PC.
Cochrane Database Syst Rev. 2001;(4)

MAMMOGRAPHY SCREENING

TRUTH, LIES AND CONTROVERSY

PETER C GØTZSCHE

The Benefits and Harms of Breast Cancer Screening:

An Independent Review

Authors:

The Independent UK Panel on Breast Cancer Screening



**A report jointly commissioned by
Cancer Research UK and the Department of Health (England).**

October 2012

Criteria for INDEPENDENT assessment:

“...no Panel member has previously published work on breast screening, which helps to ensure an objective and independent assessment of the evidence.”

Members of the Independent UK Panel on Breast Cancer screening:

Chair: Professor Sir Michael G Marmot, professor of epidemiology and public health and director of the Institute of Health Equity at University College, London

Panel members:

- Professor Douglas Altman, director of the centre for statistics in medicine at the University of Oxford
- Professor David Cameron, professor of oncology and clinical director of the Edinburgh Cancer Research Centre
- Professor John Dewar, consultant and honorary professor of clinical oncology at Dundee University
- Professor Simon Thompson, director of research in biostatistics at the University of Cambridge
- Maggie Wilcox, patient advocate

UK Independent Panel ,The Lancet 2012 studies are from 1963 at 1991

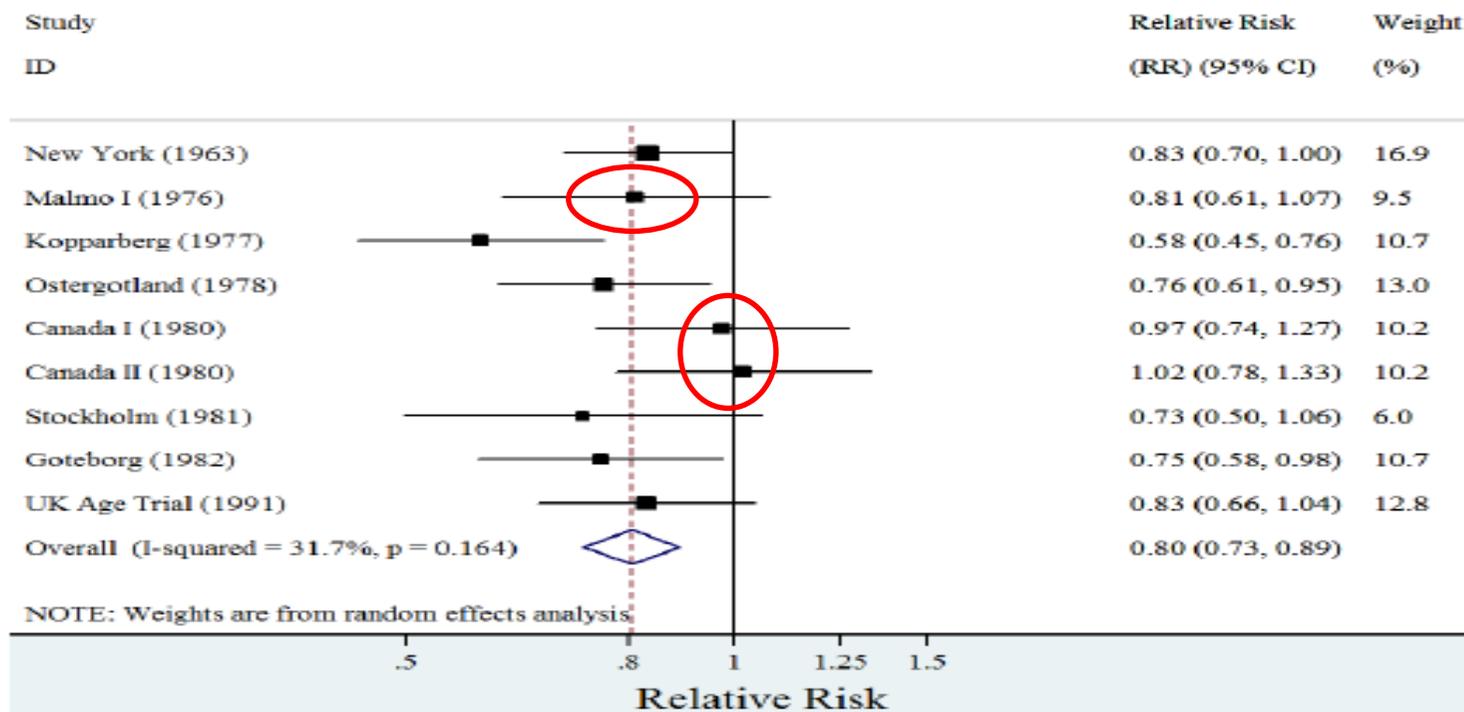
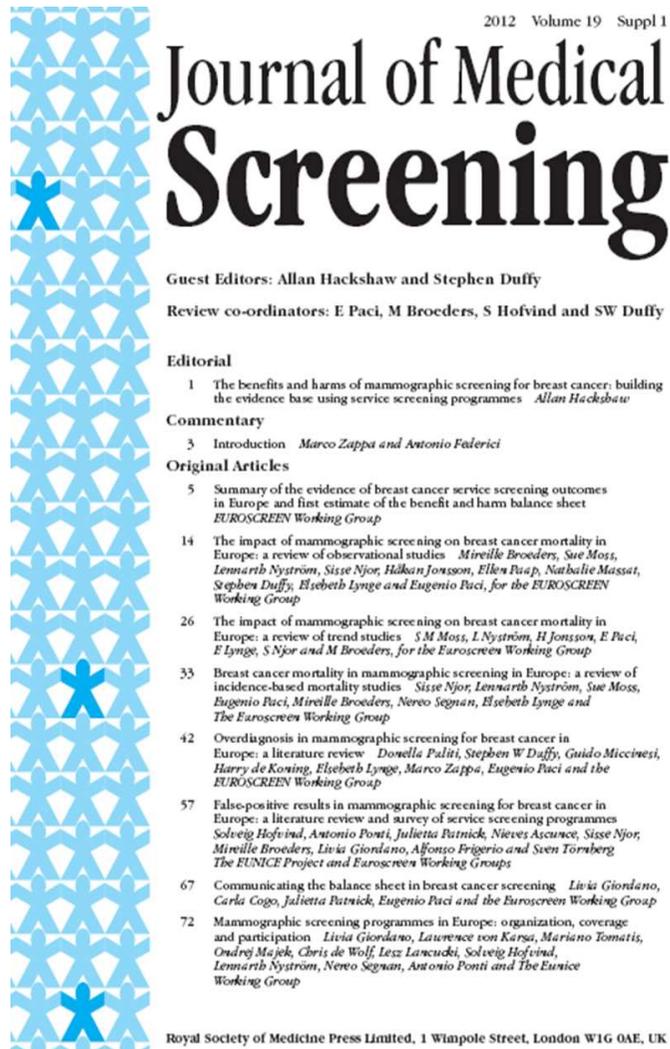


Figure 3.1 Meta-analysis of the breast cancer screening trials: relative risk (RR) of breast cancer mortality after 13 years of follow-up. Adapted from the Cochrane Review (Gøtzsche 2011).

Note: Malmö II is excluded because follow-up approximating 13 years was not available; the Swedish Two County (Kopparberg and Östergötland) and Canada I and II trials are split into their component parts; the Edinburgh trial is excluded because of

The Cochrane Review 2001 selected trials with 'adequate randomisation',
concluding for no effect

EUROSCREEN WG JMS , 2012



We reviewed all the observation studies evaluating the impact of a population-based mammographic screening programme in Europe on breast cancer mortality.

Trend studies (n=17): the analysis of breast cancer mortality trends is not adequate for evaluating the impact of screening

Incidence-based mortality studies (n=20): the pooled estimate of breast cancer mortality reduction from IBM studies was 38% among screened women.

Case-control studies (n=8): the pooled estimate of breast cancer mortality reduction from case-control studies was 48% among screened women, after adjustment for self-selection bias.

Una figura molto distortante

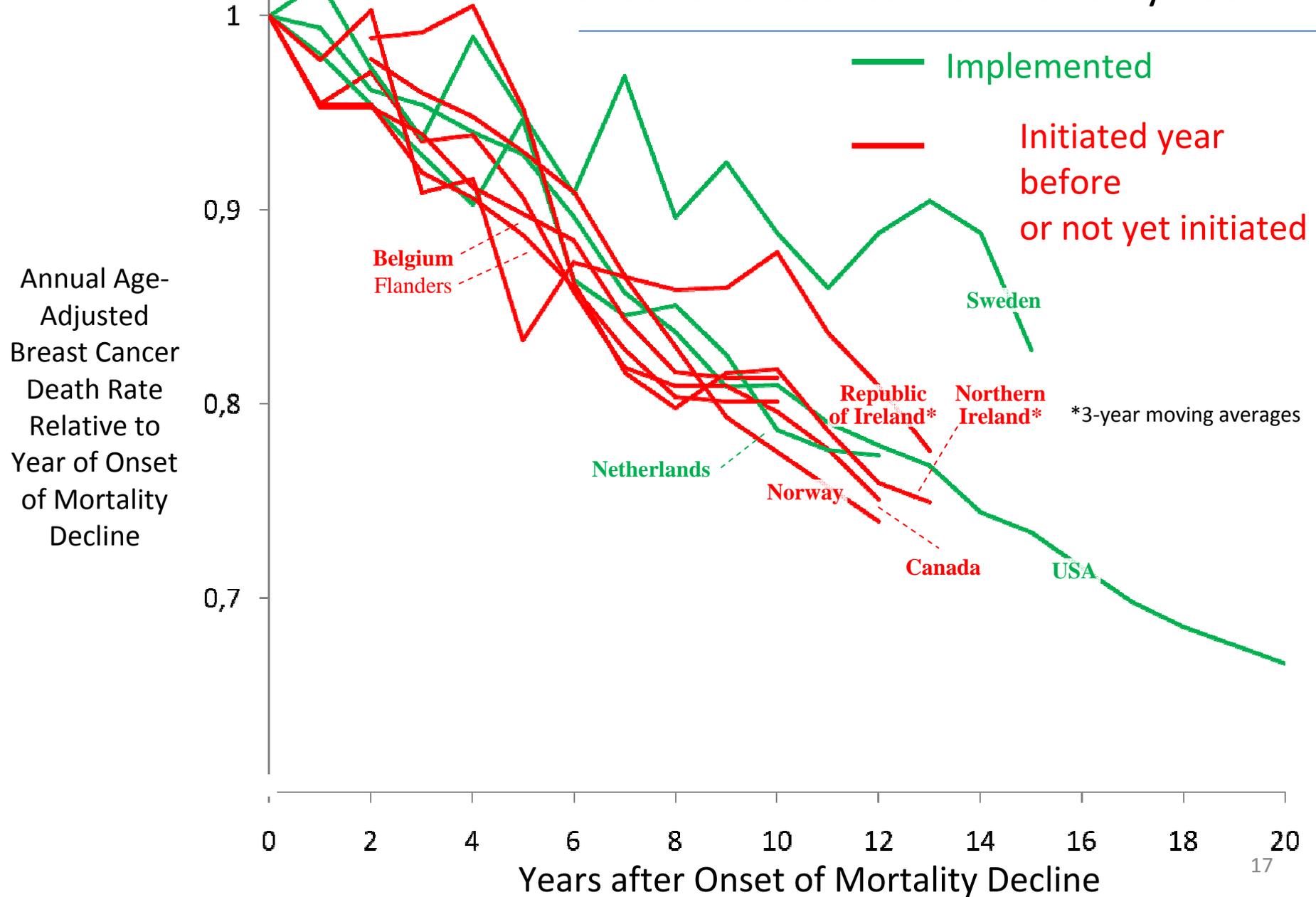
Sue Moss , JMS ,2012

Comparison of RCTs and trend studies

RCTs	Trend studies
only include deaths from breast cancer in women diagnosed after invitation to screening ('refined' mortality)	effect of screening diluted due to use of unrefined mortality
measure exposure of all women from date of randomisation (effectively first invitation)	implementation of screening usually phased over several years
have an appropriate contemporaneous comparison group (the control arm)	difficult to identify appropriate comparison group

Miller, 2015

Status of national screening mammography at onset of breast cancer mortality decline

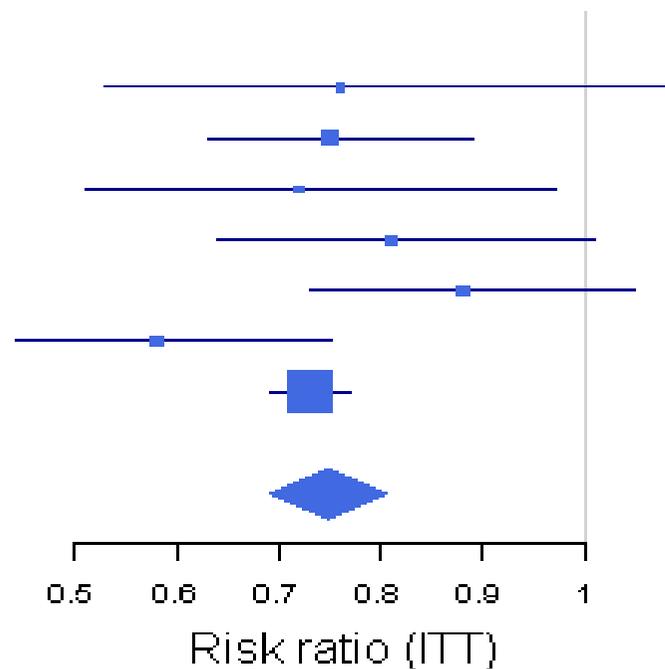


Incidence Based Mortality studies: women invited vs not invited (50-69)

**Prospective study-only breast cancer deaths within cases
who had screening opportunity.
Intention to treat, non randomised, analysis**

25% mortality reduction

Study	RR	Lower	Upper
Hakama 1997	0.76	0.53	1.09
Olsen 2005	0.75	0.63	0.89
Sarkeala 2008	0.72	0.51	0.97
Paci 2002	0.81	0.64	1.01
Kalager 2010	0.88	0.73	1.05
Ascunce 2007	0.58	0.44	0.75
SOSSEG 2006	0.73	0.69	0.77
Summary (Random)	0.75	0.69	0.81



ORIGINAL ARTICLE

The impact of mammographic screening on breast cancer mortality in Europe: a review of observational studies

Mireille Broeders, Sue Moss, Lennarth Nyström, Sisse Njor, Håkan Jonsson, Ellen Paap, Nathalie Massat, Stephen Duffy, Elsebeth Lyng and Eugenio Paci, for the EUROSREEN Working Group

Case Control studies:

Women screened versus unscreened.

Major problem is selection bias, due to volunteer participation.

Methods are crucial (comparable to per protocol analysis).

It is an estimate of the individual benefit.

Study	OR	Lower	Upper
Gabe 2007	0.65	0.39	1.09
→ Puliti 2008	0.55	0.36	0.85
Otto 2011	0.51	0.4	0.66
Van Schoor 2011	0.28	0.12	0.6
Paap 2010	0.24	0.1	0.58
Allgood 2008	0.52	0.32	0.84
Fielder 2004	0.75	0.49	1.14

Summary (Random) 0.52 0.42 0.65

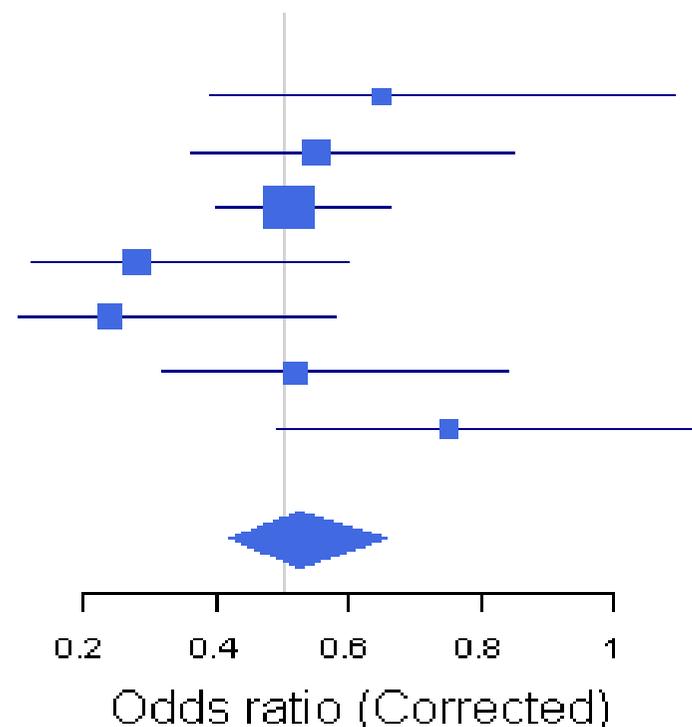
-48%

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48% reduction



Handbook 15 –IARC WHO Prevention Monograph.
 Publication is expected at the end of 2015.
 Based on a worldwide review.

Evaluation of breast cancer screening with mammography

Age range (years)	Reduction in breast cancer mortality	
	Efficacy	Effectiveness
40–44	<i>Inadequate</i>	<i>Limited</i>
45–49		<i>Limited</i>
50–69	<i>Sufficient</i>	<i>Sufficient</i>
70–74	<i>Inadequate</i>	<i>Sufficient</i>
Optimal screening interval	<i>Inadequate</i>	<i>No data</i>

THE NEW ENGLAND JOURNAL of MEDICINE

SPECIAL REPORT

Breast-Cancer Screening — Viewpoint of the IARC Working Group

Béatrice Lauby-Secretan, Ph.D., Chiara Scocianti, Ph.D., Dana Loomis, Ph.D., Lamia Benbrahim-Talaa, Ph.D., Véronique Bouvard, Ph.D., Franca Bianchini, Ph.D., and Kurt Straif, M.P.H., M.D., Ph.D., for the International Agency for Research on Cancer Handbook Working Group

La monografia del progetto IMPATTO:



**Complessivamente
il dataset IMPATTO
comprende una casistica di
81.275 casi di k mammario, fino al
2005.**

**Collaborazione Registri Tumori e
Servizi di Screening**

Indice

Autori

IMPACT Working Group

Introduzione

A. Federici, M. Zappa

Come cambia l'epidemiologia del tumore della mammella nell'epoca dello screening mammografico.

Il ruolo dei programmi di screening di popolazione e dei Registri Tumori in Italia

E. Paci, D. Puliti

La situazione italiana d

Il tumore della mammella in I

C. Buzzoni, E. Crocetti, S. Fe

L'andamento della mortalità

R. De Angelis, D. Pierannunz

I programmi di screening in I

L. Giordano, D. Giorgi

Le differenze geografiche in c

D. Puliti

Cosa è cambiato in Ital

La valutazione della riduzione

D. Puliti

La stima della sovradiagnosi d

D. Puliti

La sopravvivenza per carcinom

E. Coviello, G. Miccinesi

Screening mammografico e ri

M. Zorzi, S. Guzzinati

L'incidenza dei tumori in stac

L. Bucchi

Valutazione dei cancri d'inter

L. Bucchi

Stima della sensibilità dei pro

S. Guzzinati, M. Zorzi

Morfologia e screening: i risu

R. Tumino, A. Sigona

Misclassificazione della causa

C.A. Goldoni

Materiale e metodi

Schede riassuntive per ogni ce

IMPACT Working Group

Il progetto IMPATTO: mate

IMPACT Working Group

Centro	Periodo in studio	N°	Inizio screening
Torino	1988 - 2003	10350	1992-1998
Verona	1997 - 2003	2396	1999-2001
Rovigo	1996 - 2003	1060	1998-1999
Treviso	1999 - 2003	1094	2003-2004
Varese	1990 - 2002	6761	2000-2003
Sondrio	1997 - 2006	1127	2000-2001
	2001 - 2005	4580	2006
Trento	1996 - 2004	2418	2001
Parma	1992 - 2005	4451	1997
Reggio Emilia	1997 - 2005	3299	1994-2001
Ferrara	1991 - 2004	4154	1997-1999
Modena	1992 - 2006	7363	1995-2000
Bologna *	1997 - 2004	5699	1997-1999
Romagna	1989 - 2004	9019	1996-2000
Firenze	1990 - 2004	6592	1991-1998
Perugia	1997 - 2003	1559	1997
Napoli	1998 - 2005	1607	1998 - 2005
Ragusa	1990 - 2004	1712	1993-2001
Palermo	1999 - 2005	3760	2005
Siracusa	1999 - 2002	728	2001 (a)
Trapani	2002 - 2005	776	No
Catania *	2003 - 2005	1565	1999 (b)
		82070	

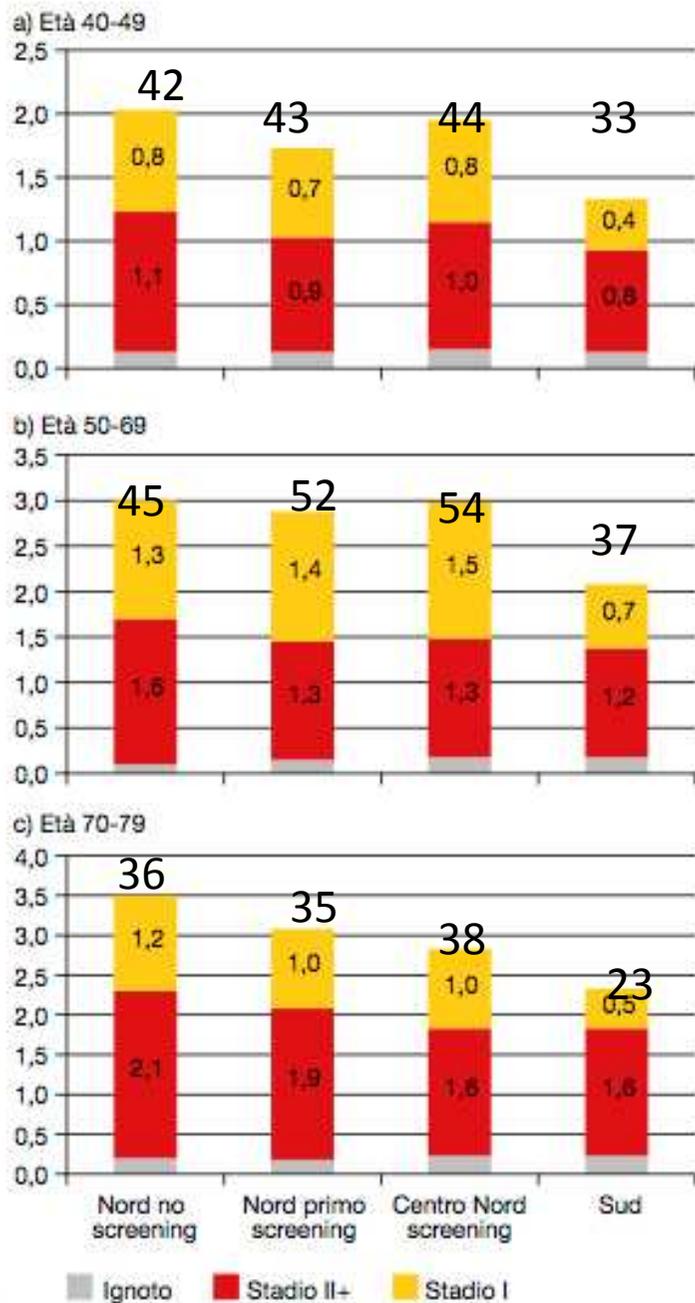


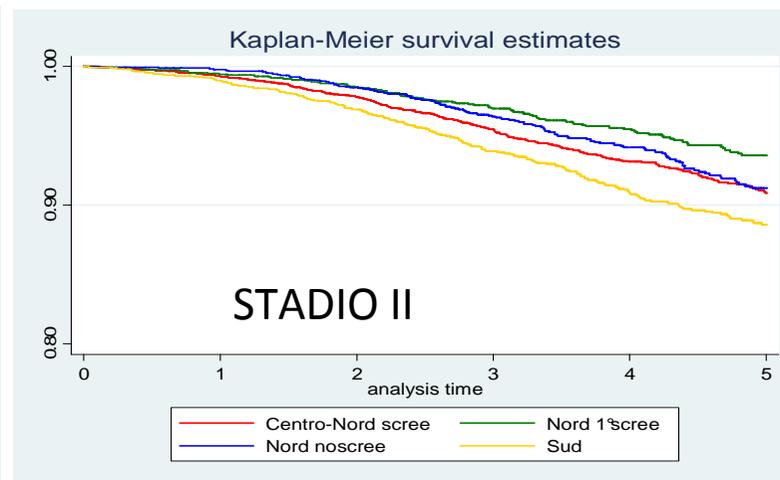
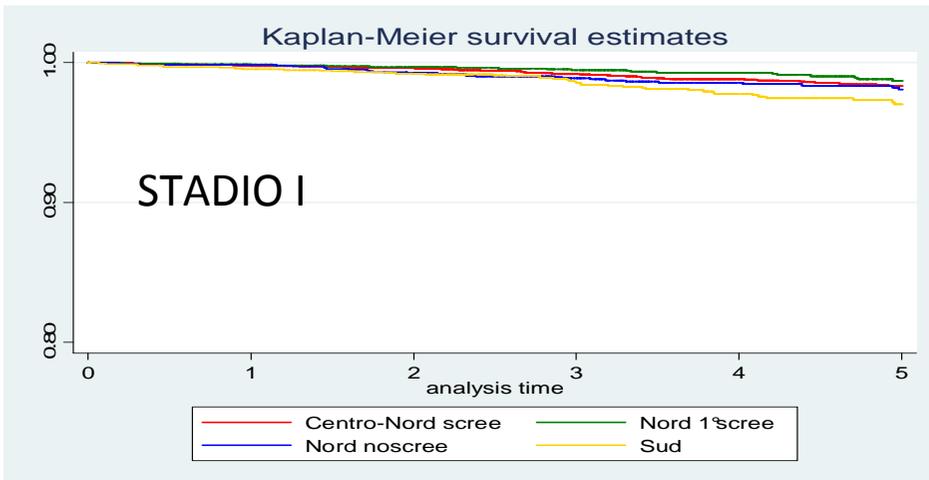
Figura 5. Tassi di incidenza per stadio del tumore e per ripartizione; periodo 2000-2006.

Stadio del Tumore alla mammella alla Diagnosi (Registri Tumori di popolazione, AIRTUM) per area geografica e classi di età.

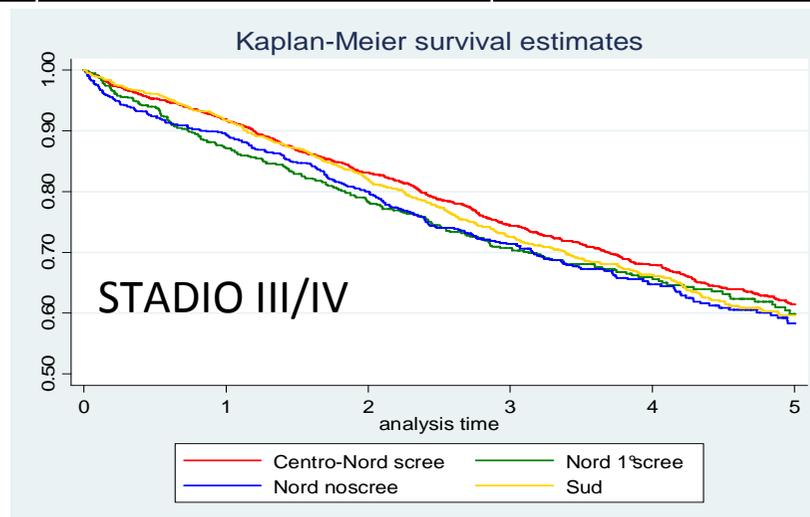
. Anni 2000-2005

Proporzione di Stadi precoci (Stadio I)

Non include i TiS che sono più frequenti nelle zone coperte da programmi di screening



Sopravvivenza a 5 anni per Stadio alla diagnosi			
STADIO			
AREA	I	II	III/IV
<u>Nord e Centro</u>	98%	91%	61%
<u>Sud</u>	97%	89%	60%

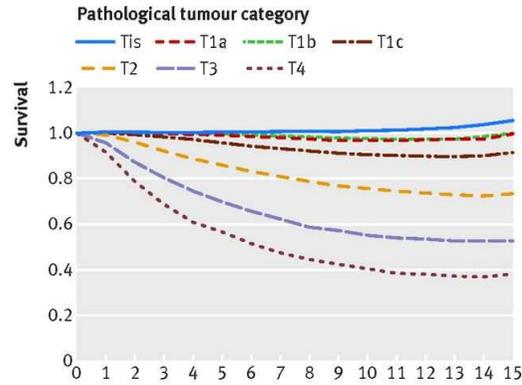




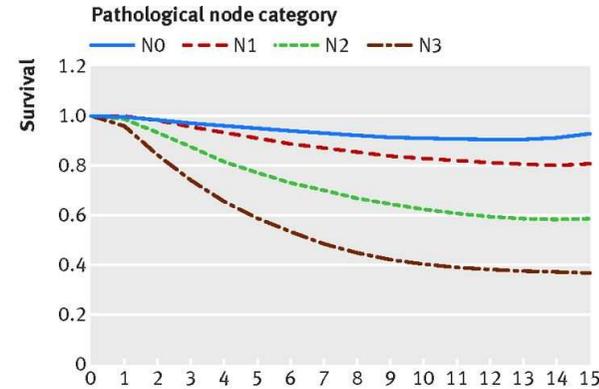
Influence of tumour stage at breast cancer detection on survival in modern times: population based study in 173 797 patients

Sepideh Saadatmand,¹ Reini Bretveld,² Sabine Siesling,^{2,3} Madeleine M A Tilanus-Linthorst¹

1999-2005

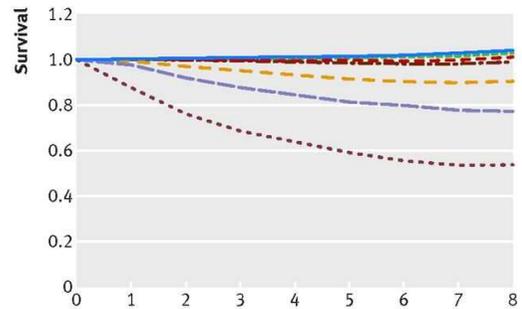


	Follow-up time (years)		
Numbers at risk	0	5	10
DCIS	6920	6456	3998
T1a	2398	2222	1399
T1b	9599	8874	5422
T1c	29 114	25 471	15 065
T2	26 624	20 040	10 724
T3	2711	1688	801
T4	2862	1254	585

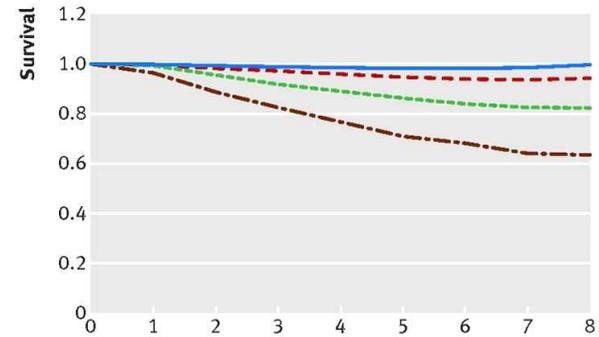


	Follow-up time (years)		
Numbers at risk	0	5	10
N0	52 238	44 309	26 030
N1	19 012	15 855	9016
N2	5985	4221	2188
N3	2993	1620	700

2006-2012



	Follow-up time (years)			
Numbers at risk	0	2	4	8
DCIS	10 348	8386	4939	2278
T1a	3846	3093	1755	778
T1b	12 213	9977	6217	2906
T1c	34 163	28 044	17 399	8101
T2	27 946	21 948	13 130	5861
T3	3213	2355	1269	535
T4	1840	1061	516	184



	Follow-up time (years)			
Numbers at risk	0	2	4	8
N0	63 544	50 782	30 687	14 027
N1	21 901	17 630	10 716	4916
N2	5400	4391	2705	1230
N3	2724	2061	1117	470

Sepideh Saadatmand et al. *BMJ* 2015;351:bmj.h4901





Influence of tumour stage at breast cancer detection on survival in modern times: population based study in 173 797 patients

I A Tilanus-Linthorst¹

WHAT IS ALREADY KNOWN ON THIS TOPIC

Survival decreases with increasing tumour size and number of positive lymph nodes at detection of breast cancer, but data on these prognostic factors in patient cohorts after 2004 are scarce

(Neo-)adjuvant systemic therapies have improved significantly since 2004, and breast cancer survival rates have increased

To what extent stage at breast cancer detection, in terms of tumour size and number of positive lymph nodes, still determines survival in contemporary times is unknown

WHAT THIS STUDY ADDS

Relative survival of female breast cancer patients in a Dutch nationwide population based study of two time cohorts (1999-2005 and 2006-12) improved from 91% to 96% at five years' follow up

Tumour size and nodal status still have a significant and major influence on overall mortality independent of age and tumour biology in the current era of more conservative

Early stage at more favourable

CONCLUSIONS

Tumour stage at diagnosis of breast cancer still influences overall survival significantly in the current era of effective systemic therapy. Diagnosis of breast cancer at an early tumour stage remains vital.

Progetto Impatto; Studio di Coorte , 400.000 donne. Sottomesso per pubblicazione.Veneto, RER, Toscana.

	Standardised Incidence Rate (per 100 000)		Standardised incidence rate ratio (95% CI)
	Attenders	Non attenders	
pT			
Tis	45.4	28	1.62 (1.43 - 1.84)
T1	252.8	174.2	1.45 (1.38 - 1.52)
T2+	66.3	108.6	0.61 (0.57 - 0.66)
Unknown	9.6	29.3	0.33 (0.28 - 0.38)
pN (only invasive)			
N0	215.5	154.3	1.40 (1.33 - 1.47)
N+	94.9	117.6	0.81 (0.76 - 0.86)
Unknown	19.1	40.6	0.47 (0.42 - 0.53)
TNM stage			
0	45.4	28	1.62 (1.43 - 1.84)
I	184.5	114.5	1.61 (1.52 - 1.71)
II+	130.1	180.6	0.72 (0.68 - 0.76)
Unknown	14	17	0.83 (0.70 - 0.98)
TOTAL invasive + in situ	374.1	340.1	1.10 (1.06 - 1.14)
TOTAL invasive	328.7	312.1	1.05 (1.01 - 1.09)

A 11 anni medi di follow up, 5%-10% di eccesso di casi nel gruppo screening. Riduzione del 28% dell'incidenza di casi in Stadio II+



Sottomesso per pubblicazione

The IARC Handbooks of Cancer Prevention - Volume 15: Breast Cancer Screening

B. Lauby-Secretan, C. Scoccianti, D. Loomis, F. Bianchini, L. Benbrahim-Tallaa, V. Bouvard, K. Straif
On behalf of the IARC Handbook vol. 15 Working Group

Evaluation of breast cancer screening with mammography

Age range (years)	Reduction in breast cancer mortality	
	Efficacy	Effectiveness
40–44	Inadequate	Limited
45–49		Limited
50–69	Sufficient	Sufficient
70–74	Inadequate	Sufficient
Optimal screening interval	Inadequate	No data

Possible adverse effects

Mammography screening detects breast cancers that would not have been diagnosed if the women had not been screened (overdiagnosis).

Sufficient

The risk of radiation-induced cancer from mammography in women aged 50 years and older is substantially outweighed by the reduction in breast cancer mortality from mammography screening.

Sufficient

Having a false-positive mammogram has short-term negative psychological consequences.

Sufficient

Cost-effectiveness

There is a net benefit from inviting women aged 50-69 years to service mammography screening.

Sufficient

Mammography screening for women aged 50-69 years can be cost-effective in countries with high breast cancer incidence.

Sufficient

Breast cancer screening can be cost-effective in low- and middle-income countries.

Limited

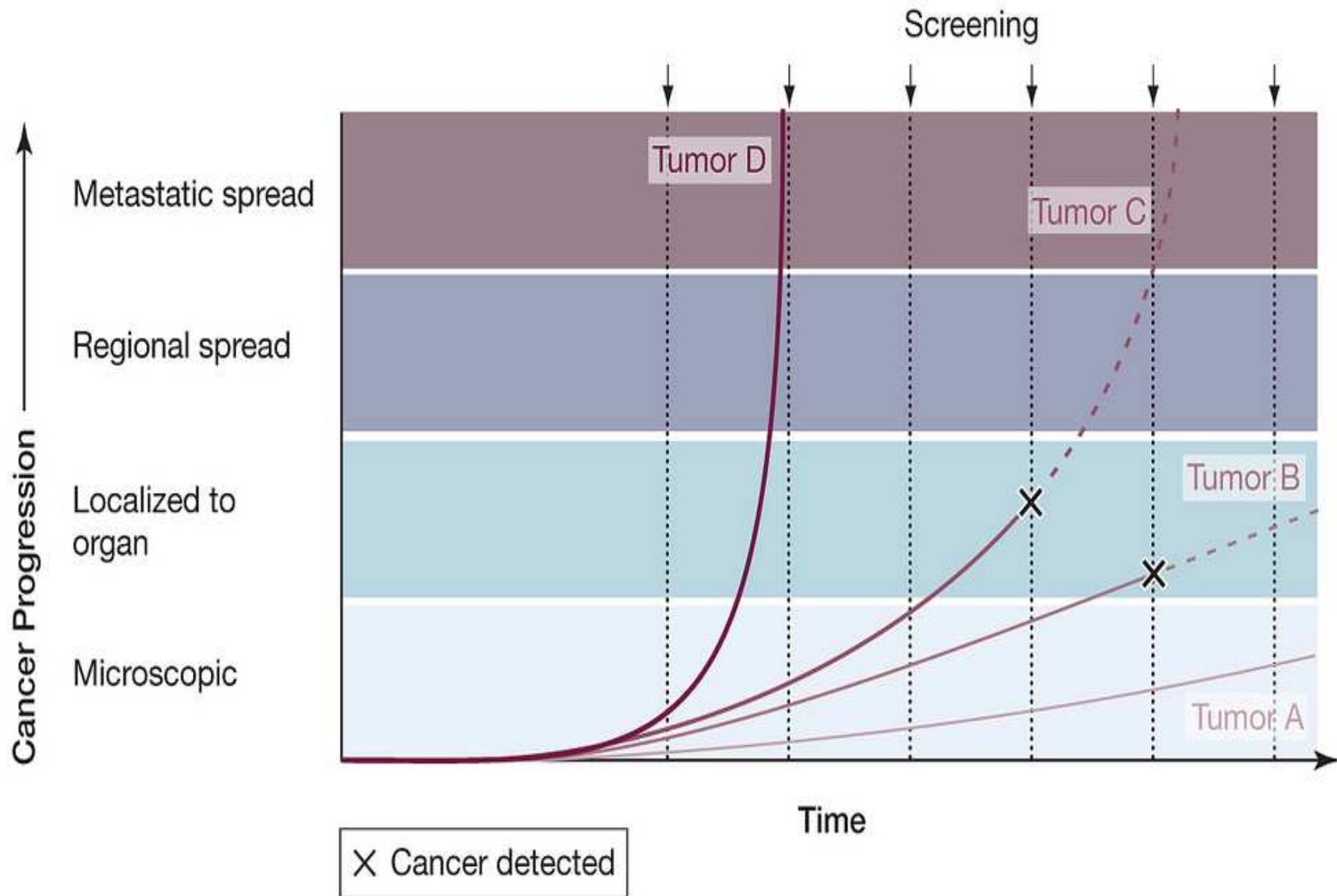
Sovradiagnosi nello screening mammografico

- La proporzione di casi di cancro (in situ e invasivi) confermati istologicamente , diagnosticati a seguito di un episodio di screening e che non sarebbero giunti all'attenzione clinica se la mammografia di screening non fosse stata eseguita.

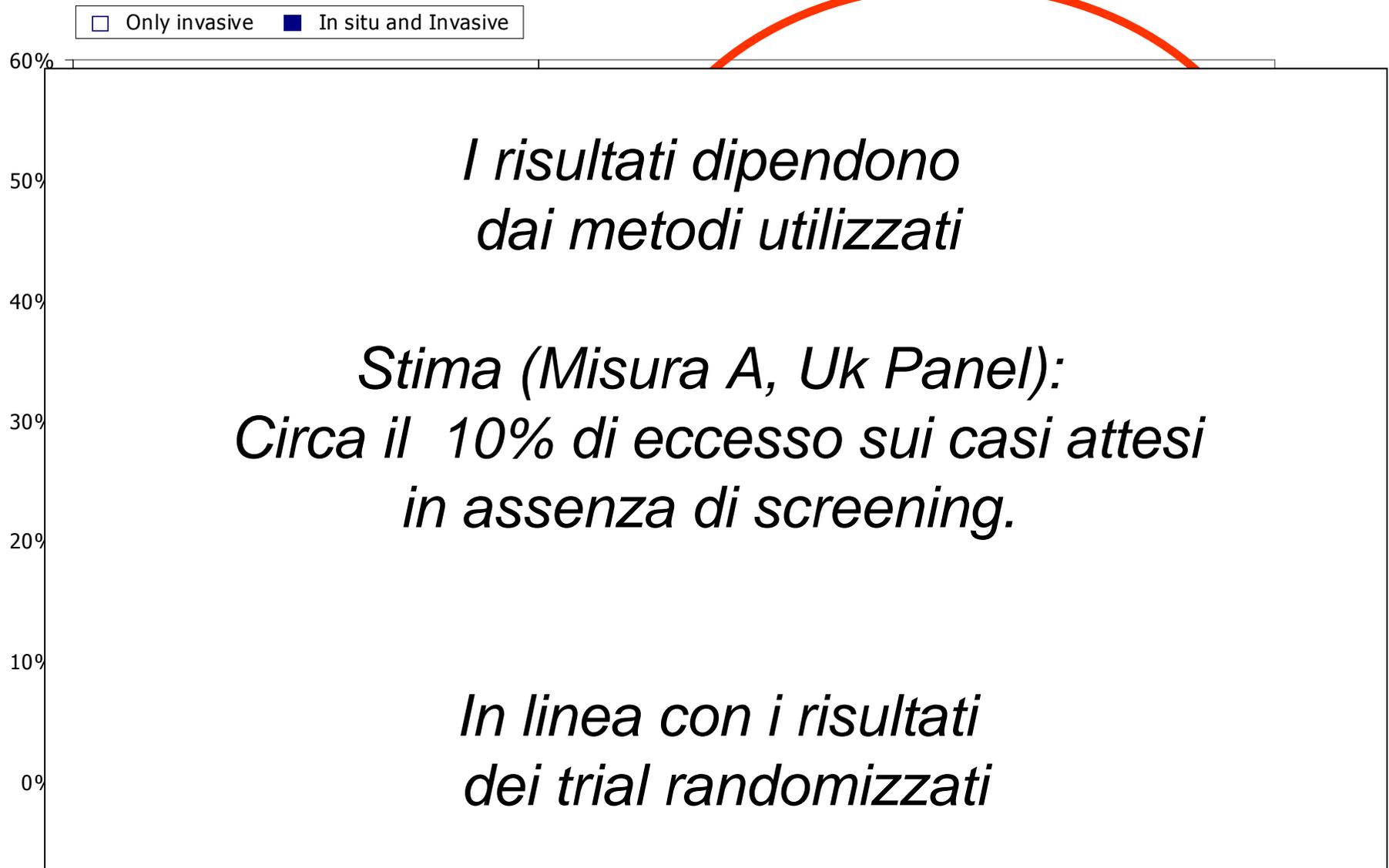
5

- E' innanzitutto un costrutto epidemiologico.
- L'eccesso di incidenza quando è attivo lo screening di popolazione è un effetto necessario dello screening mammografico e non va confuso con la sovradiagnosi
- Non siamo in grado di dire *chi* è stato sovradiagnosticato.
- Come quantificarla?

Figure 3. Screen Detection Capability Based on Tumor Biology and Growth Rates



EUROSCREEN 2012 (Puliti D. et al. , JMS, 2012)
Sovradiagnosi stimata in studi osservazionali,
classificati in base alla presenza/ assenza di aggiustamenti per
1) underlying incidence 2) Lead time



Due mondi , la stessa polemica ?

- In Europa si sono sviluppati i programmi di screening di sanità pubblica, con un proposta di controllo dell'offerta e della qualità dello screening mammografico. *La richiesta è stata di sospendere i programmi di screening di popolazione.*
- Negli Stati Uniti la diffusione dello screening mammografico, dopo lo studio HIP, è avvenuta come pratica clinica spontanea, in un clima di promozione entusiasta, e con una ideologia rivolta a promuovere la prevenzione individuale (HRT). *La principale disputa è stata sulla età di inizio e il tipo di test e sul decision-making (benefici-danni) (USPSTF/NCI vs ACS)*

Quarta edizione del Codice europeo contro il cancro



L'Agencia Internazionale per la Ricerca sul Cancro - **IARC**, l'ente dell'Organizzazione mondiale della sanità specializzato in oncologia, ha presentato la quarta edizione del **Codice europeo contro il cancro** con la partecipazione della Commissione europea. Il nuovo codice prevede 12 suggerimenti basati sulle migliori evidenze scientifiche disponibili che puntano all'adozione di stili di vita sani e a sostenere nella quotidianità la prevenzione anticancro.

Le dodici azioni quotidiane anticancro

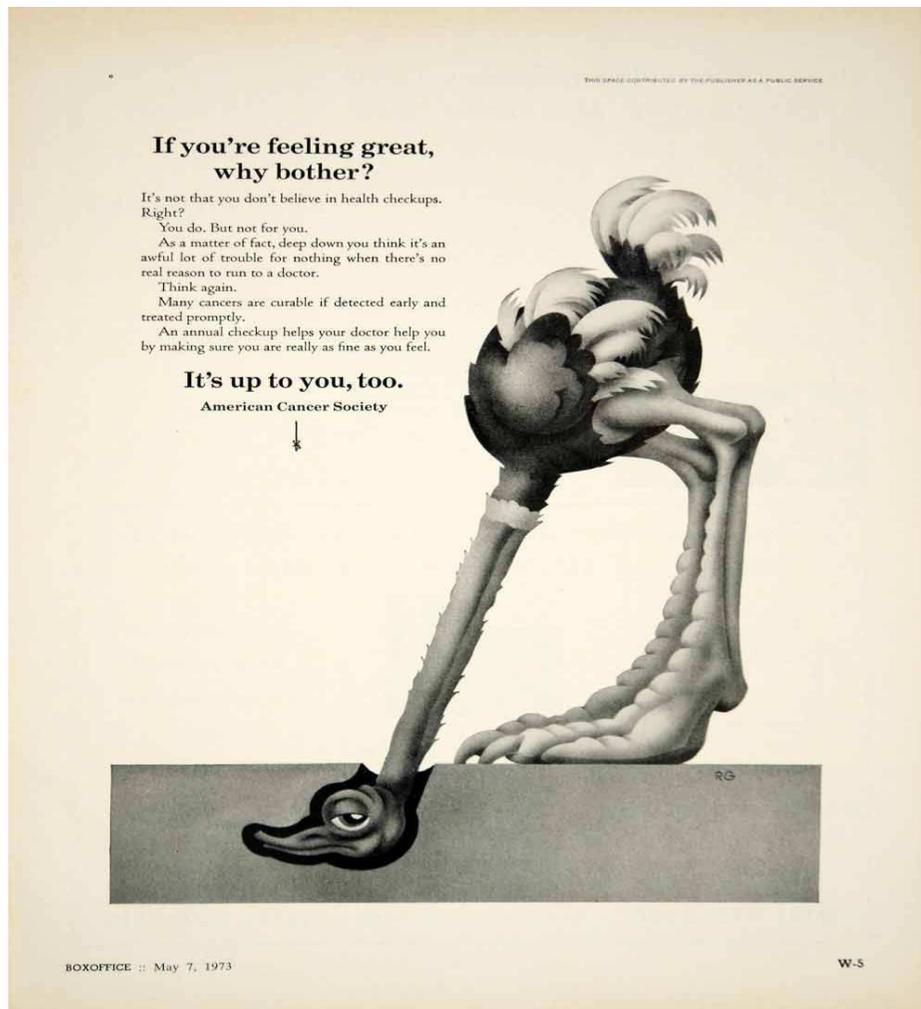
1. Non fumare. Non fare uso di tabacco
2. Non fumare in casa. Appoggia le politiche contro il fumo sul luogo di lavoro
3. Fai in modo di mantenere il peso corporeo salutare
4. Sii fisicamente attivo tutti i giorni. Limita il tempo che trascorri seduto
5. Segui una dieta sana:
 - > mangia principalmente cereali integrali, legumi, verdura e frutta
 - > limita i cibi ad alto contenuto calorico (cibi con alto contenuto di zuccheri e grassi) ed evita le bevande zuccherate
 - > evita la carne conservata; limita la carne rossa e i cibi ad alto contenuto di sale
6. Se bevi alcolici, limitane l'assunzione. Per la prevenzione del cancro non è consigliabile bere alcolici
7. Evita lunghe esposizioni al sole, con particolare attenzione ai bambini. Usa le protezioni solari. Non utilizzare lampade solari
8. Sul luogo di lavoro, proteggiti dall'esposizione ad agenti cancerogeni seguendo le istruzioni in merito alla sicurezza
9. Controlla se in casa sei esposto ad alti livelli di radiazioni radon. Attivati per ridurre i livelli di esposizione al radon
10. Per le donne:
 - > l'allattamento riduce il rischio di cancro nella donna. Se puoi, allatta il tuo bambino
 - > la terapia ormonale sostitutiva (HRT) aumenta il rischio di alcuni tipi di cancro. Limita l'uso dell'HRT
11. Assicurati che il tuo bambino sia vaccinato per:
 - > Epatite B (per i neonati)
 - > Papillomavirus - HPV (per le ragazze)
12. Aderisci ai programmi di screening per:
 - > cancro all'intestino (uomini e donne)
 - > cancro al seno (donne)
 - > cancro alla cervice (donne)

Leggi il **Codice europeo contro il cancro** (in lingua inglese)

Un punto fermo
2015 che segue alle conclusioni dell'
Independent UK Panel, Euroscreen WG, e
IARC –WHO , HB 15

Breast Cancer Screening : the US perspective

1973



- [Cancer](#). 1987 Preventive strategies for cancer in women. [Fink DJ](#). American Cancer Society, New York, NY 10016.

Preventive strategies can be widely promoted to women in order to lower their cancer risk and to find cancer before symptoms appear. Smoking control, safe sun exposure, and simple recommendations for diet and nutrition can assist women in taking control of their lifestyles to reduce cancer risk. Early cancer detection, as outlined in the American Cancer Society's Cancer Related Checkup Guidelines, can be expected to find breast, colorectal, uterine, and other forms of cancer in asymptomatic women.

Una conferenza che ha fatto epoca

Breast Cancer Screening for Women Ages 40-49

National Institutes of Health
Consensus Development Conference Statement
Jan 21-23, 1997



History of ACS Recommendations for the Early Detection of Cancer in People Without Symptoms

www.cancer.org , online

1992 -March 1997

- Breast self-exam (BSE)
- 20 and over
- Monthly
- **Clinical breast exam (CBE)**
- **20 - 39**
- **Every 3 years**
- **40 and over**
- **Yearly**
- **Mammogram**
- **40 - 49**
- **Every 1-2 years**

- **50 and over**
- **Yearly**

May 2003 - October 2015

- **Breast self-exam (BSE)**
- **20 and over**
- **Optional. Women should be told about benefits and limitations of BSE. They should report any new symptoms to their health care professional.**
- **Clinical breast exam (CBE)**
- **20 - 39**
- **Part of a periodic health exam, preferably every 3 years**
- **40 and over**
- **Part of a periodic health exam, preferably every year**
- **Mammogram**
- **40 and over**
- **Yearly, continuing for as long as a woman is in good health**

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Special Communication

Breast Cancer Screening for Women at Average Risk 2015 Guideline Update From the American Cancer Society

Kevin C. Oeffinger, MD; Elizabeth T. H. Fontham, MPH, DrPH; Ruth Etzioni, PhD; Abbe Herzig, PhD;
James S. Michaelson, PhD; Ya-Chen Tina Shih, PhD; Louise C. Walter, MD; Timothy R. Church, PhD;
Christopher R. Flowers, MD, MS; Samuel J. LaMonte, MD; Andrew M. D. Wolf, MD; Carol DeSantis, MPH;
Joannie Lortet-Tieulent, MSc; Kimberly Andrews; Deana Manassaram-Baptiste, PhD; Debbie Saslow, PhD;
Robert A. Smith, PhD; Otis W. Brawley, MD; Richard Wender, MD

- **Una svolta importante che sposta la valutazione dall'efficacia a potenziali benefici, limiti e danni associati allo screening.**
- **La raccomandazione *forte* è di iniziare lo screening a 45 anni.**
- **Annuale fino a 54 e poi biennale fino a che vi è una attesa di vita di 10 anni o più. (*Qualificata*, dipende da valori e preferenze sul rischio beneficio)**
- **Opportunità di fare screening mammografico annuale tra i 40-44 (*Qualificata*)**
- **Non vien più raccomandato l'esame clinico del seno (CBE) come screening per le donne a rischio medio , ad alcuna età. (*Qualificata*)**

Box 2. American Cancer Society Guideline for Breast Cancer Screening, 2015

These recommendations represent guidance from the American Cancer Society (ACS) for women at average risk of breast cancer: women without a personal history of breast cancer, a suspected or confirmed genetic mutation known to increase risk of breast cancer (eg, BRCA), or a history of previous radiotherapy to the chest at a young age.

The ACS recommends that all women should become familiar with the potential benefits, limitations, and harms associated with breast cancer screening.

Recommendations^a

1. Women with an average risk of breast cancer should undergo regular screening mammography starting at age 45 years. (*Strong Recommendation*)
 - 1a. Women aged 45 to 54 years should be screened annually. (*Qualified Recommendation*)
 - 1b. Women 55 years and older should transition to biennial screening or have the opportunity to continue screening annually. (*Qualified Recommendation*)
 - 1c. Women should have the opportunity to begin annual screening between the ages of 40 and 44 years. (*Qualified Recommendation*)
2. Women should continue screening mammography as long as their overall health is good and they have a life expectancy of 10 years or longer. (*Qualified Recommendation*)
3. The ACS does not recommend clinical breast examination for breast cancer screening among average-risk women at any age. (*Qualified Recommendation*)

^a A strong recommendation conveys the consensus that the benefits of adherence to that intervention outweigh the undesirable effects that may result from screening. Qualified recommendations indicate there is clear evidence of benefit of screening but less certainty about the balance of benefits and harms, or about patients' values and preferences, which could lead to different decisions about screening.^{12,13}

Qualità , estensione dello screening e ricerca

- **E' necessario mantenere la qualità e la sorveglianza dei programmi di screening mammografico con offerta di sanità pubblica (LEA)**
- **E' necessario superare le diseguaglianze territoriali sia come offerta che come performance e qualità dei programmi.**
- **E 'opportuno estendere la copertura alle donne 70-74**
- **L'estensione dello screening (annuale) alle donne 45-49 (54) deve essere accompagnata dalla ricerca su i rapporti tra età, genetica, densità e caratteristiche dei tumori.**
- **E' necessario offrire interventi pubblici appropriati alle donne che non sono coperte o hanno specifiche esigenze dallo screening mammografico (altre fasce di età, alto rischio, follow up di donne che hanno avuto un tumore mammario)**
- **La possibilità di ricerca e intervento attraverso iniziative integrate sugli stili di vita (Obesità, Sindrome Metabolica, ...) deve essere valutata per essere inserita nei programmi di sanità pubblica.**

