

**5<sup>th</sup>** Aarhus Workshop in:

# Breast Surgery

## Breast Cancer in Older Women



THE UNIVERSITY  
*of* LIVERPOOL

**Riccardo A Audisio, MD, FRCS**  
University of Liverpool - UK

**”I disclose no conflict of interest”**



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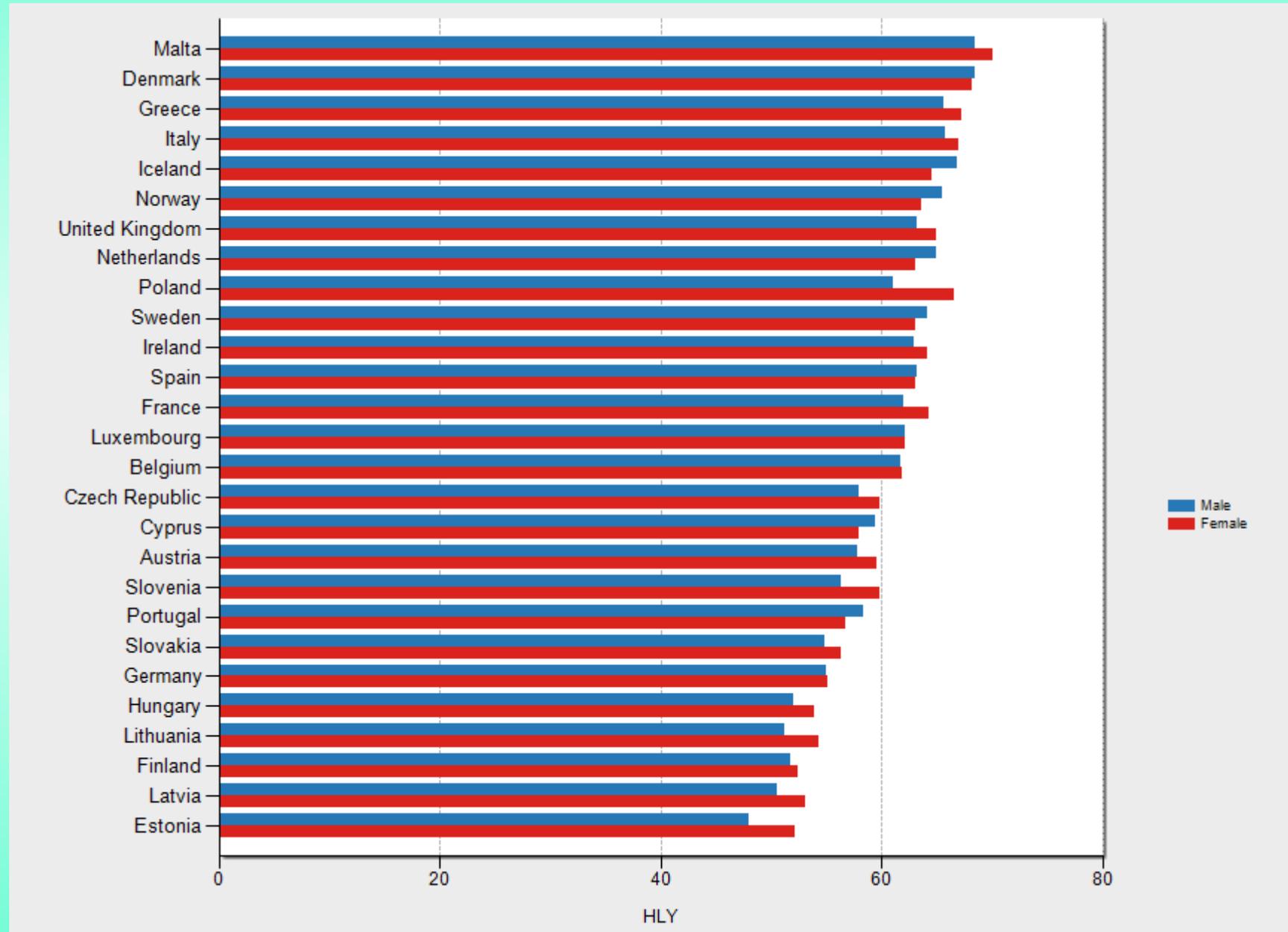
Surviving to a  
CHANCES OF SURVIVING



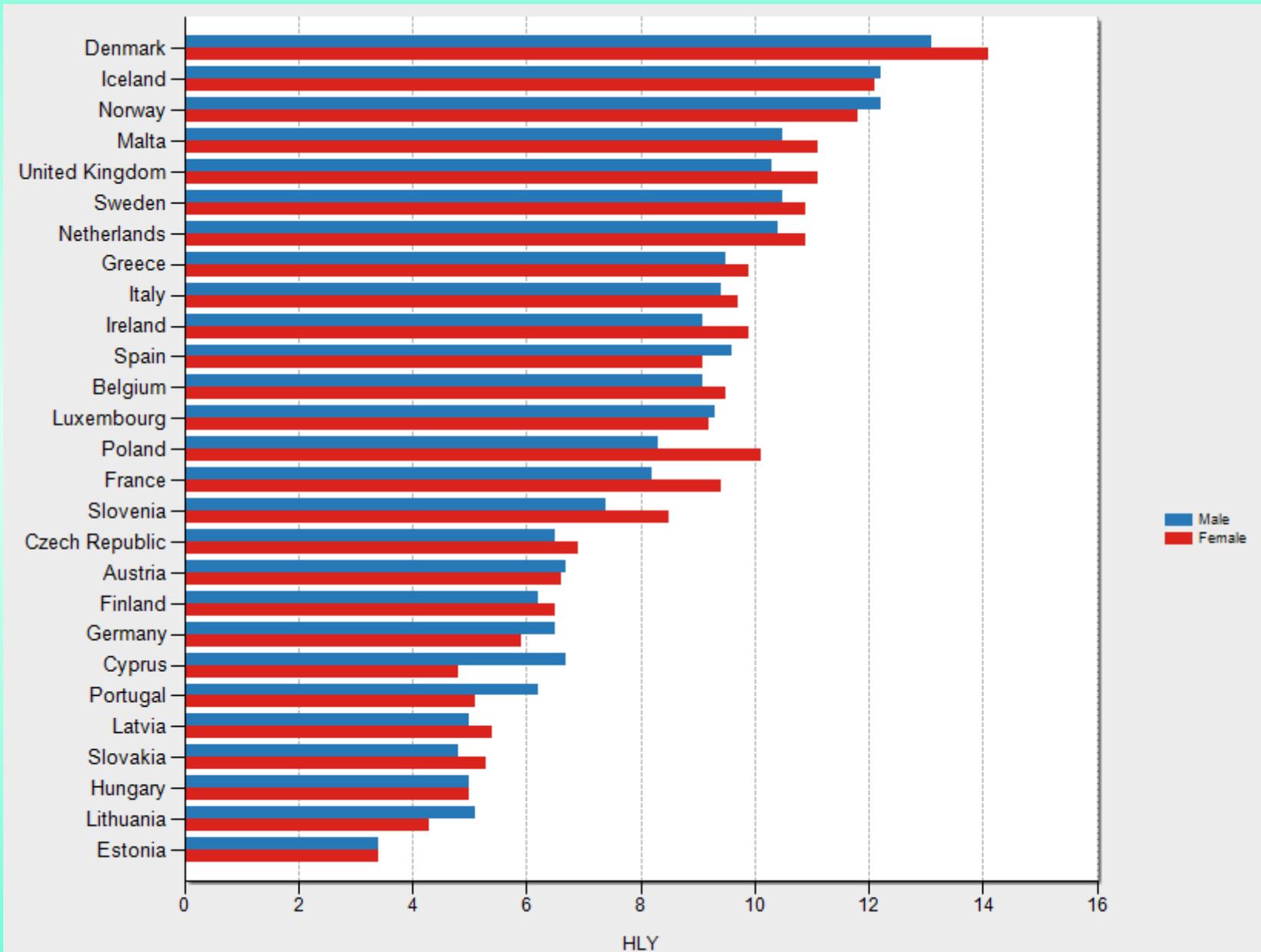
# An ageing population

in the UK today are expected to  
celebrate their **100<sup>th</sup>** birthday

# healthy life yrs at birth - EU



# healthy life yrs at age 65 - EU



# Increased life expectancy



**China has the largest elderly population (92 millions)**

<http://www.worldmapper.org/index.html>

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**older patients are  
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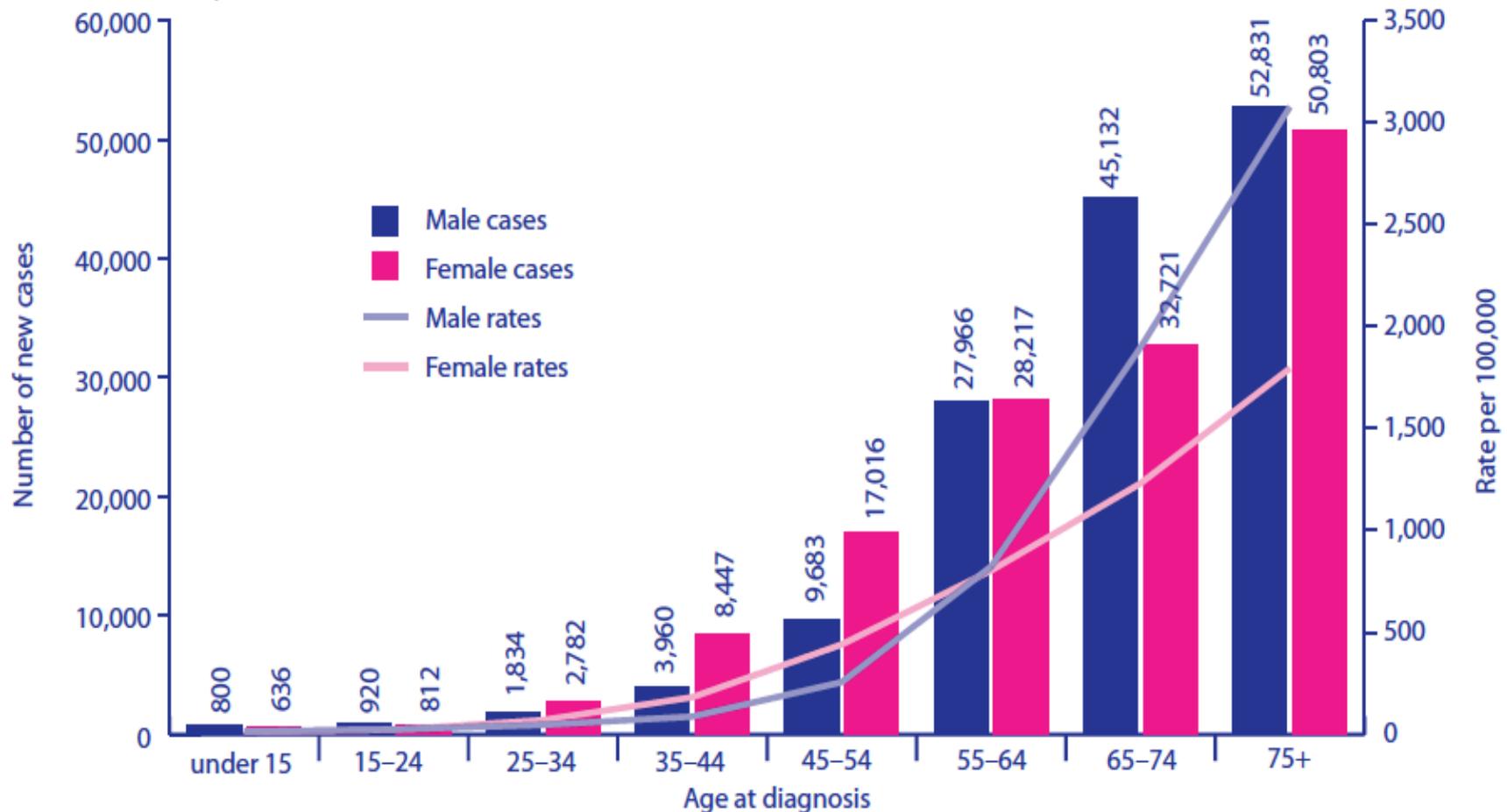
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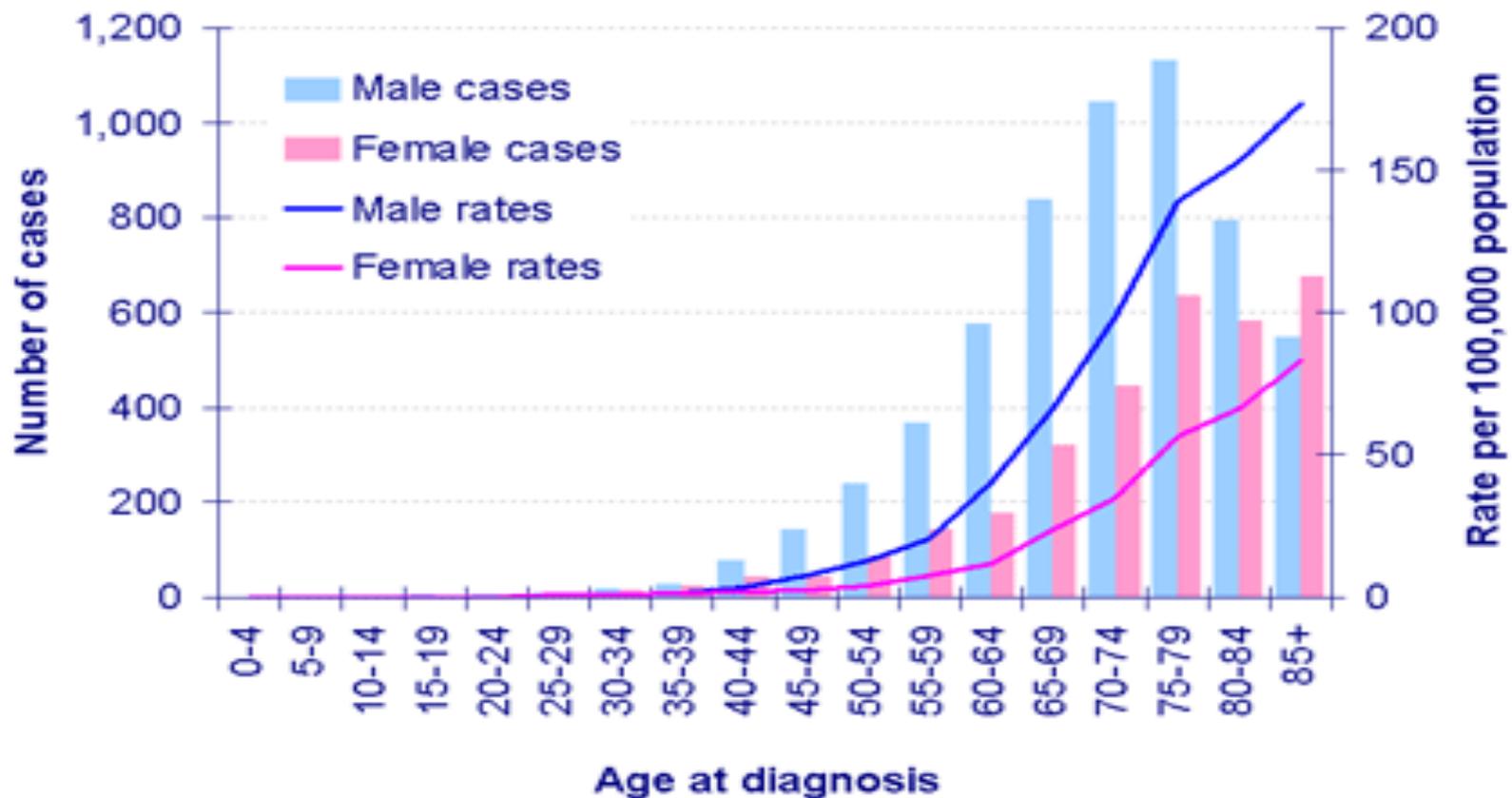
# Cancer Incidence with Age – UK Figures

Figure Two: Number of new cases and age-specific incidence rates for all malignant neoplasms\*, by sex, UK, 2004



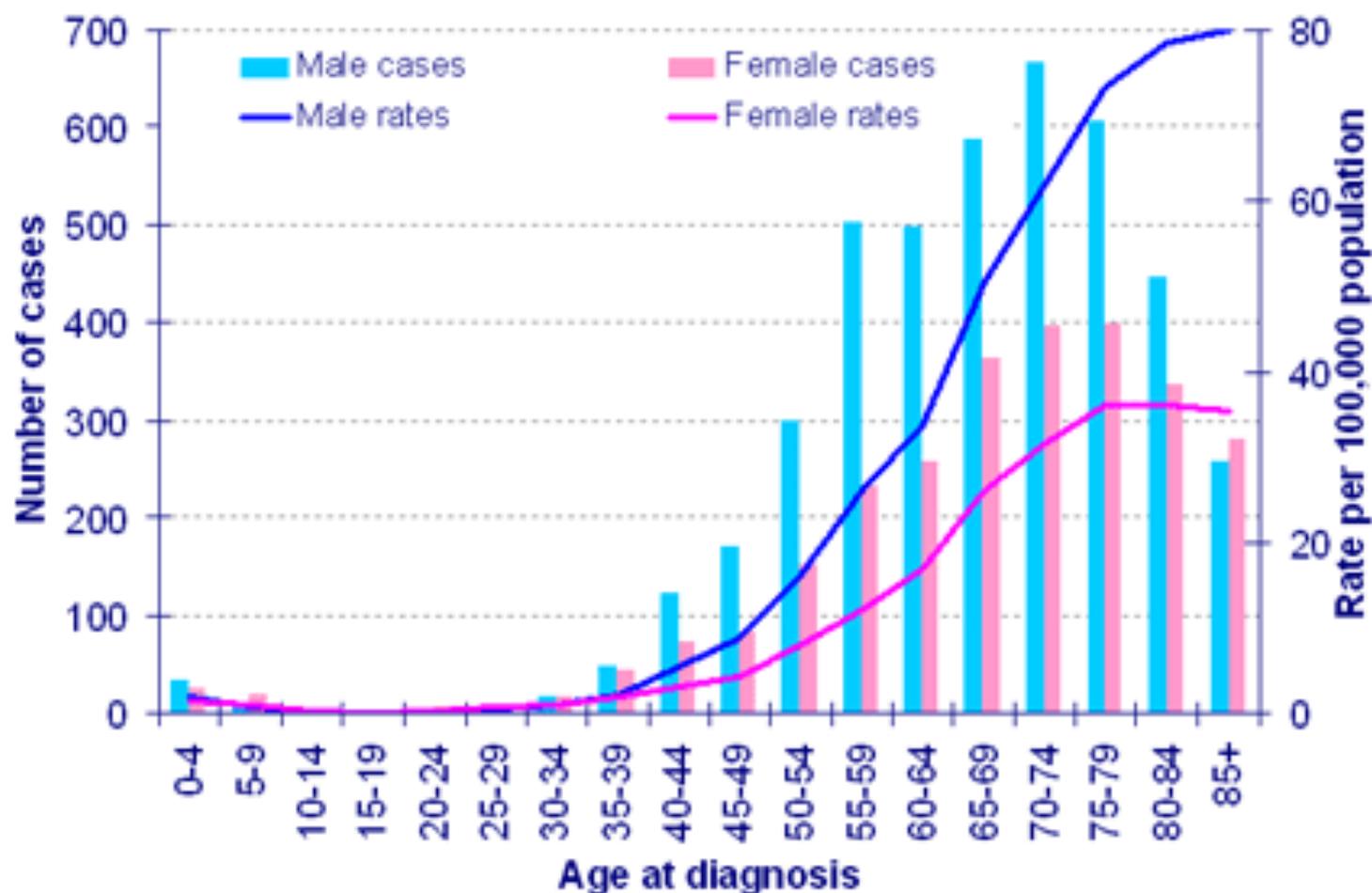
# Age-specific Gastric ca. - UK

**Figure 1.1: Numbers of new cases and age-specific incidence rates by sex, stomach cancer, UK 2002**

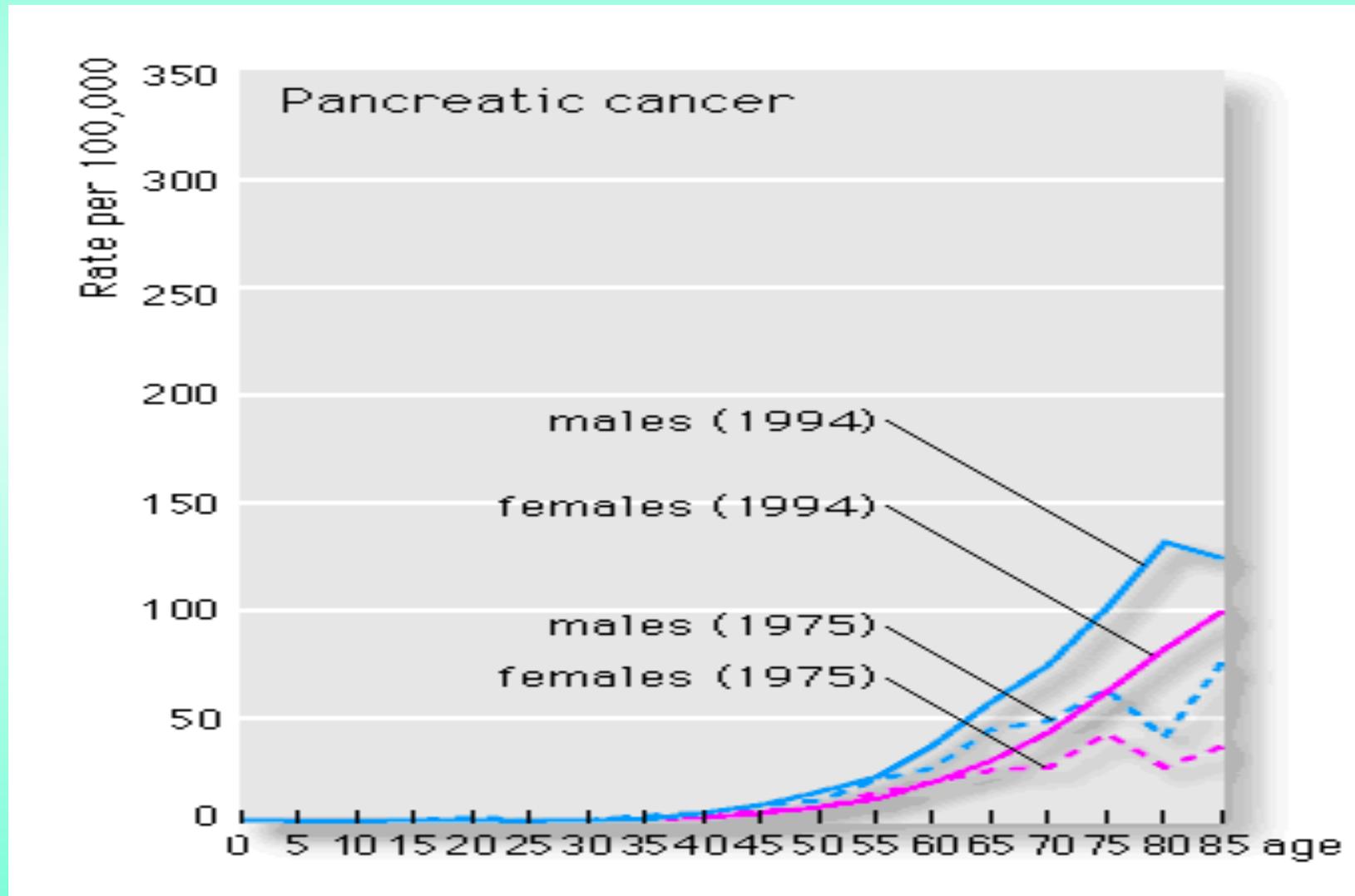


# Age-specific Kidney ca. - UK

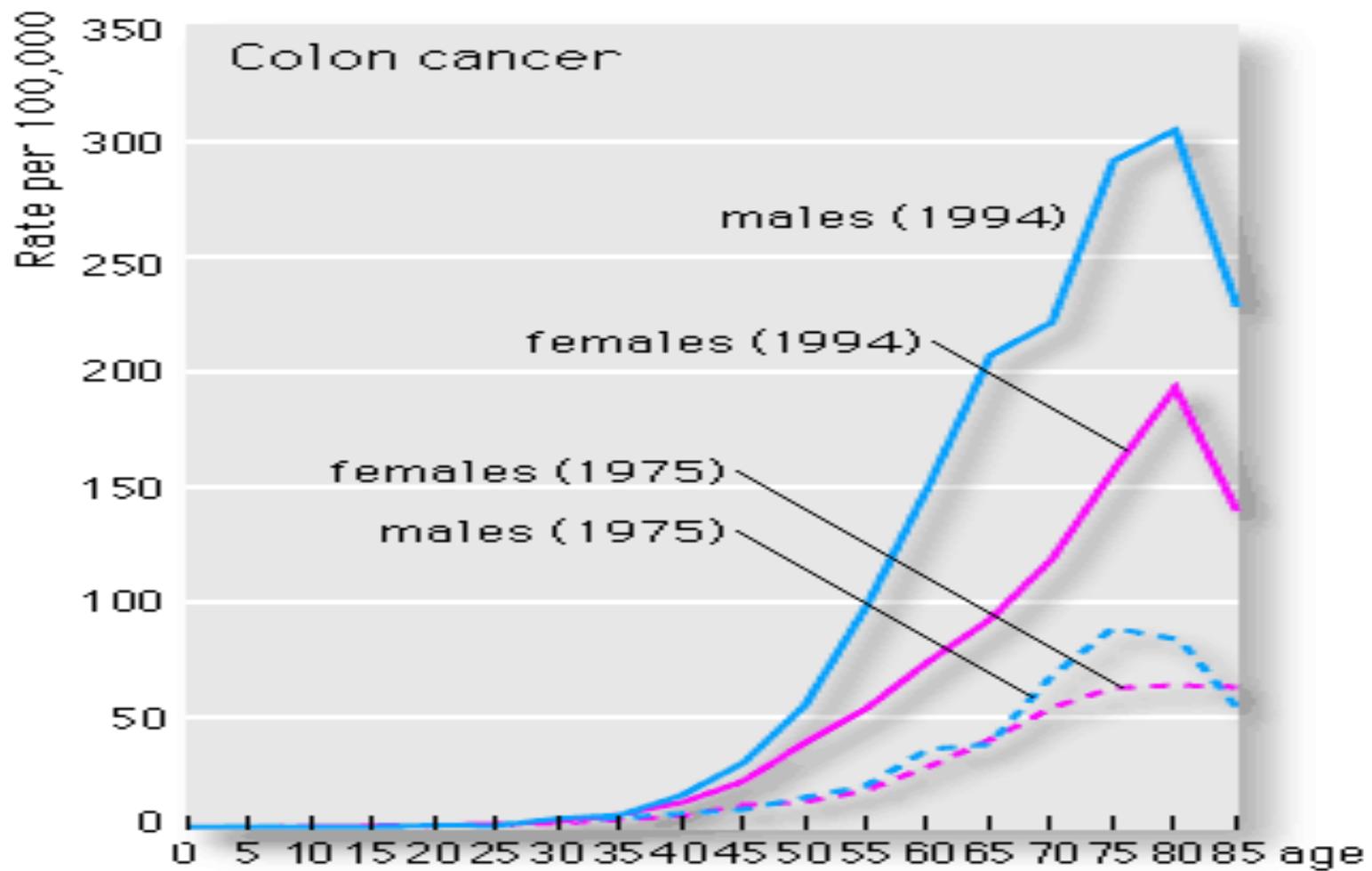
Figure 1.2: Numbers of new cases and age specific incidence rates, by sex, kidney cancer, UK 2004



# Age-specific Pancreatic ca. - Japan



# Age-specific Colon ca. - Japan



With the exception of cervical ca. all cancers prevail in the elderly population

Probability of Developing Invasive Cancers Over Selected Age Intervals

		Birth to 39 (%)	40 to 59 (%)	60 to 79 (%)	80 and over (%)
All Sites†	Male	1.36 (1 in 73)	8.03 (1 in 12)	13.75 (1 in 7)	18.75 (1 in 5)
	Female	1.92 (1 in 52)	9.01 (1 in 11)	14.55 (1 in 7)	19.55 (1 in 5)
Bladder‡	Male	.02 (1 in 4603)			
	Female	.01 (1 in 9557)			
Breast	Female	.44 (1 in 229)			
Colon & rectum	Male	.06 (1 in 166)			
	Female	.06 (1 in 166)			
Leukemia	Male	.01 (1 in 100)			
	Female	.01 (1 in 100)			
Lung & bronchus	Male	.01 (1 in 100)			
	Female	.01 (1 in 100)			
Melanoma of skin	Male	.01 (1 in 100)			
	Female	.01 (1 in 100)			
Prostate	Male	.01 (1 in 100)			
	Female	.01 (1 in 100)			
Stomach	Male	.01 (1 in 100)			
	Female	.01 (1 in 100)			
Uterus	Male	.01 (1 in 100)			
	Female	.01 (1 in 100)			
Pancreas	Male	.01 (1 in 100)			
	Female	.01 (1 in 100)			
Ovary	Male	.01 (1 in 100)			
	Female	.01 (1 in 100)			
Cervix	Male	.01 (1 in 100)			
	Female	.01 (1 in 100)			
Total	Male	1.36 (1 in 73)	8.03 (1 in 12)	13.75 (1 in 7)	18.75 (1 in 5)
	Female	1.92 (1 in 52)	9.01 (1 in 11)	14.55 (1 in 7)	19.55 (1 in 5)

\*Probability of developing or dying of cancer. Based on cancer cases diagnosed during 1998-2000. The "1 in" statistic and the inverse of the percentage are rounded.

†All sites except skin cancers and in situ carcinomas except urinary bladder. ‡Includes invasive and in situ cancer cases.

Source: Surveillance Research Branch, National Cancer Institute, [www.cancer.gov/devcan](http://www.cancer.gov/devcan)

**cancer affects older people**

**Estimated**



## morphology

	<40	40-54	55-64	65-74	>75
ductal	81.9	71.9	71.1	70.7	73.8
lobular	4.4	11.4	12.6	15.0	13.6
mixed	4.0	3.8	3.8	4.0	6.0

## grade

	<40	40-54	55-64	65-74	>75
1	6.2	15.7	16.1	15.9	13.8
2	39.9	49.1	52.5	55.9	57.3
3	46.6	29.8	27.1	24.6	26.4

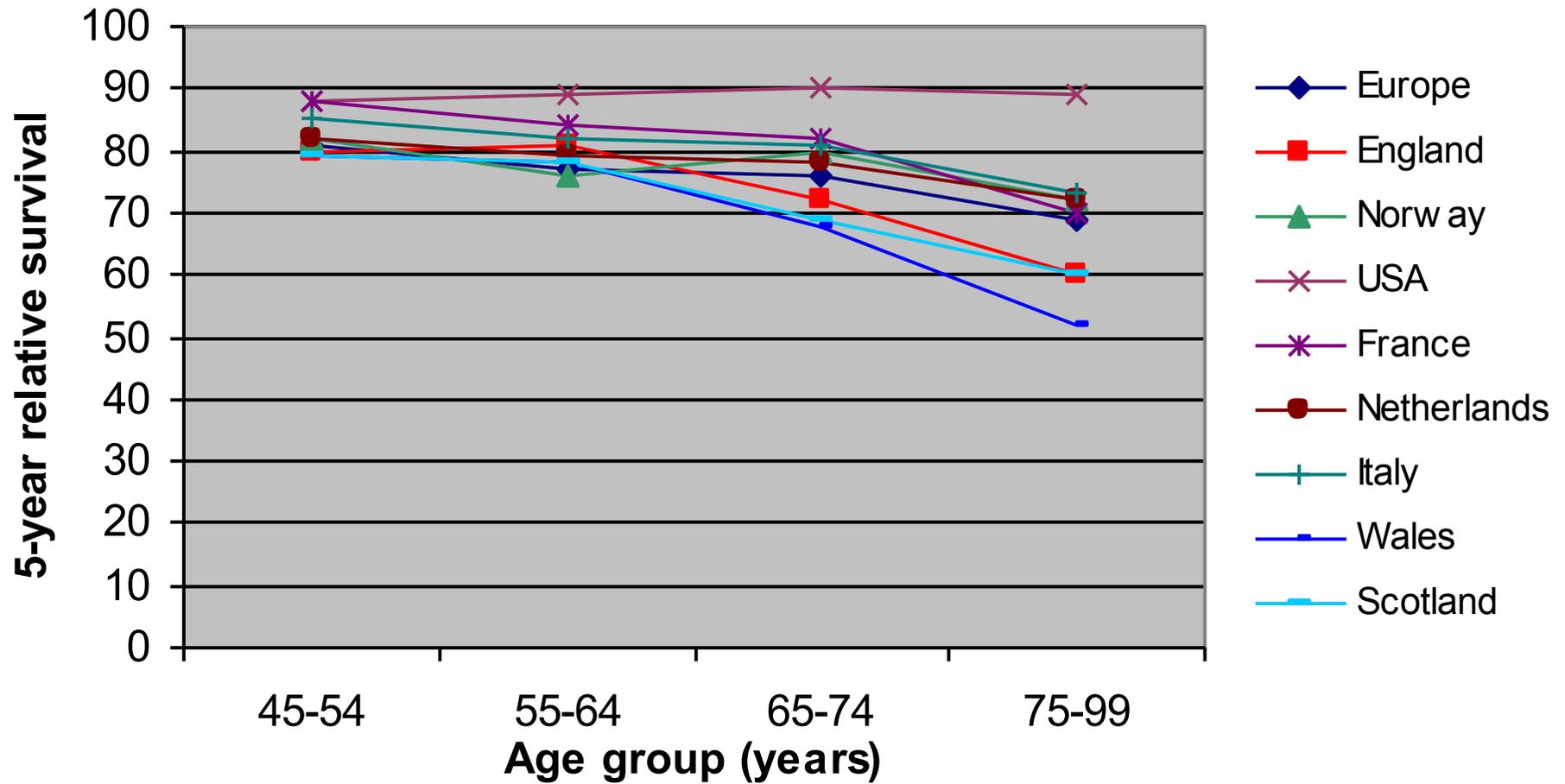
# stage

	<40	40-54	55-64	65-74	>75
In situ	9.1	13.5	12.8	10.5	6.5
I	35.5	38.6	42.8	42.9	30.6
II	34.5	31.1	29.0	30.3	37.5
III	12.8	10.5	9.6	10.2	13.8
IV	1.8	1.6	1.7	2.0	2.4

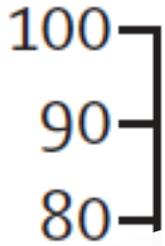
## ER/PR status

	<40	40-54	55-64	65-74	>75
positive	65.5	80.3	82.0	84.4	84.6
negative	30.1	16.1	15.1	13.3	13.3

### Comparison of the 5 year relative survival fo female breast cancer patients in Europe and the USA



# Breast



## Cancer survival in Europe 1999–2007 by country and age: results of EUROCARE-5—a population-based study

Roberta De Angelis, Milena Sant, Michel P Coleman, Silvia Francisci, Paolo Baili, Daniela Pierannunzio, Annalisa Trama, Otto Visser, Hermann Brenner, Eva Ardanaz, Magdalena Bielska-Lasota, Gerda Engholm, Alice Nennecke, Sabine Siesling, Franco Berrino, Riccardo Capocaccia, and the EUROCARE-5 Working Group\*

### Summary

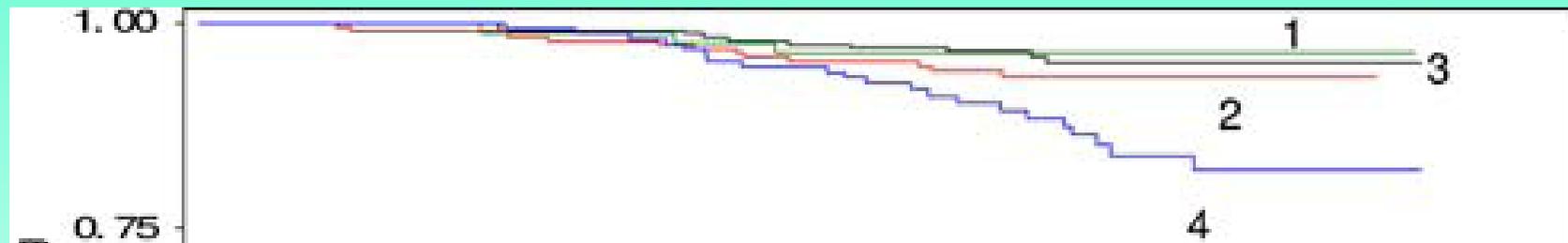
**Background** Cancer survival is a key measure of the effectiveness of health-care systems. EUROCARE—the largest cooperative study of population-based cancer survival in Europe—has shown persistent differences between countries for cancer survival, although in general, cancer survival is improving. Major changes in cancer diagnosis, treatment, and rehabilitation occurred in the early 2000s. EUROCARE-5 assesses their effect on cancer survival in 29 European countries.

55–64

65–74

≥75

Lancet Oncol 2013  
 Published Online  
 December 5, 2013  
[http://dx.doi.org/10.1016/S1470-2045\(13\)70546-1](http://dx.doi.org/10.1016/S1470-2045(13)70546-1)  
 See Online/Comment  
[http://dx.doi.org/10.1016/S1470-2045\(13\)70546-1](http://dx.doi.org/10.1016/S1470-2045(13)70546-1)



Breast Cancer Res Treat (2007) 102:227–236  
 DOI 10.1007/s10549-006-9321-x

ORIGINAL PAPER

## Effect of undertreatment on the disparity in age-related breast cancer-specific survival among older women

Cynthia Owusu · Timothy L. Lash ·  
 Rebecca A. Silliman

Received: 29 May 2006 / Accepted: 23 June 2006 / Published online: 27 September 2006  
 © Springer Science+Business Media B.V. 2006

### Abstract

**Objectives** Assess the relationship between age and

definitive primary therapy (71% vs. 84%,  $P < 0.0001$ ), chemotherapy (9% vs. 28%,  $P < 0.0001$ ), and guide-

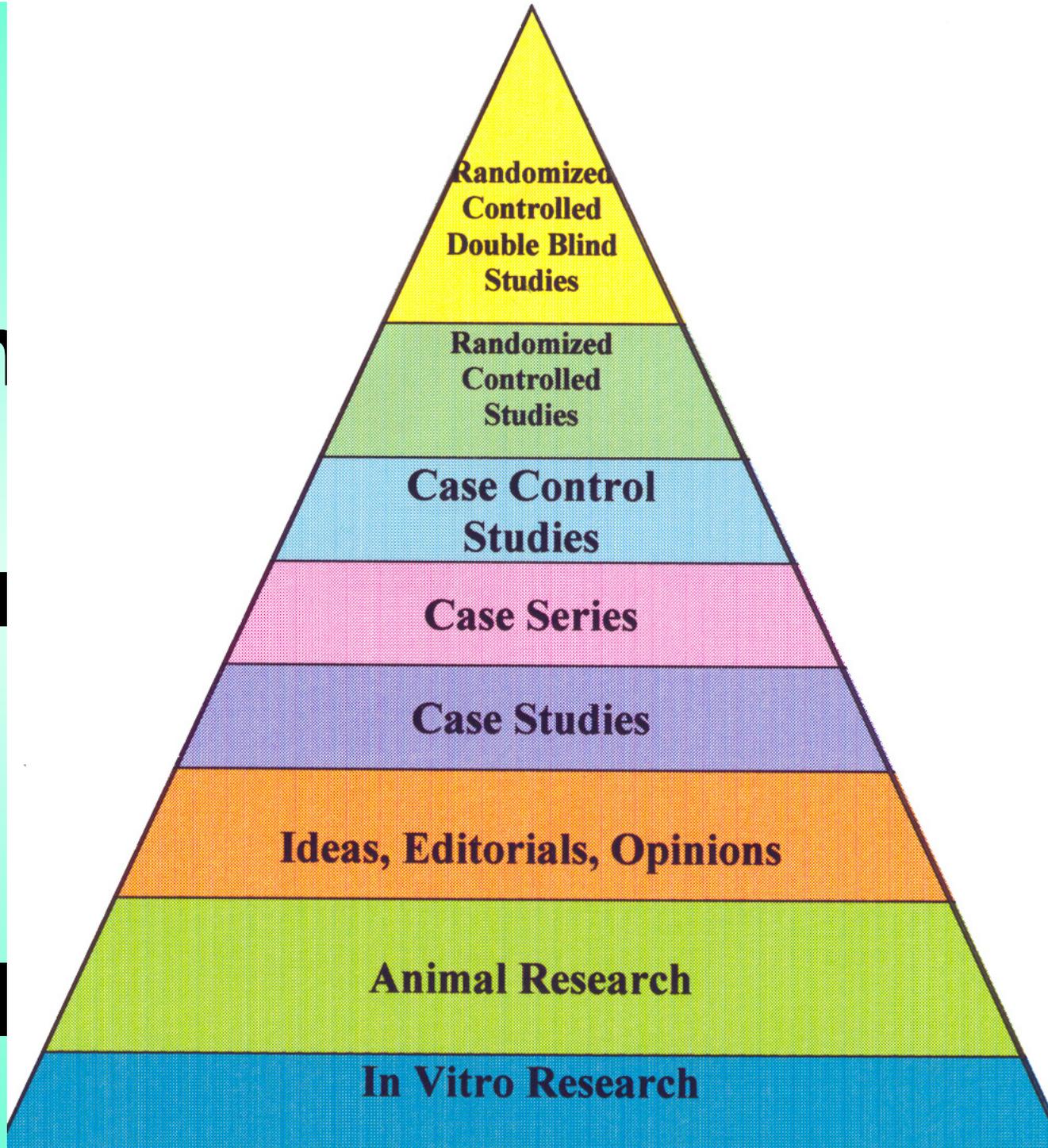
4= Age >75 years who did not receive guideline therapy

Owusu C. Breast Cancer Res Treat 2007

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# Under-representation of elderly patients into surgical trials

## Enrollment of Older Patients in Cancer Treatment Trials in Canada: Why is Age a Barrier?

By Karen W.L. Yee, Joseph L. Pater, Lam Pho, Benny Zee, and Lillian L. Siu

**Purpose:** To evaluate the enrollment of older patients ( $\geq 65$  years) in Canadian cancer treatment trials and compare accrual of older patients in Canada and the United States.

**Patients and Methods:** A retrospective analysis of the number of older patients enrolled in National Cancer Institute of Canada Clinical Trials Group (NCIC CTG) treatment trials between 1993 and 1996 was performed. These rates were compared with the corresponding rates in the general population of patients who were  $\geq 65$  years old and had cancer, obtained from Statistics Canada, and those published by the Southwest Oncology Group (SWOG) in the United States.

**Results:** Between 1993 and 1996, 4,174 patients were enrolled onto 69 NCIC CTG trials of 16 tumor types. Older patients accounted for 22% of trial enrollees, compared

with 58% of the Canadian population with cancer. This discrepancy existed in all cancer types except for multiple myeloma. The percentages of older patients enrolled were also analyzed by study type: 15% in adjuvant trials, 25% in metastatic trials, 29% in investigational new drug trials, 24% in phase I trials, and 21% in supportive care trials. The overall proportion of older patients enrolled onto Canadian trials (22%) was slightly lower than that in SWOG trials (25%).

**Conclusion:** Age remains a barrier for accrual onto cancer treatment trials, even when reimbursement is not an issue. Strategies to overcome this barrier, including the implementation of trials specifically tailored to patients aged  $\geq 65$  years, are prudent in light of our aging population.

*J Clin Oncol* 21:1618-1623. © 2003 by American Society of Clinical Oncology.

AS THE POPULATION ages and life expectancy increases, diseases in individuals 65 years of age and older will have an increasing impact on the Canadian healthcare system. In 1996, the life expectancy at birth for Canadians was 78.6 years (ie, 75.7 years for men and 81.4 years for women).<sup>1</sup> Unfortunately, since 1981, the incidences of cancer have continued to increase with increasing age. In the year 2000, 60,300 new cases of cancer (46%) and 38,200 cancer deaths (59%) were estimated

imposed restrictions, high burden of comorbidity, physician attitudes and knowledge, patient preferences, and social, geographic, or financial barriers.

Although Canada and the United States share many cultural similarities, there are significant differences between their healthcare and social programs. The Canadian healthcare system, unlike the American system, provides reimbursement for healthcare costs regardless of whether they are incurred while

# Barriers to Clinical Trial Participation by Older Women With Breast Cancer

By M. Margaret Kemeny, Bercedis L. Peterson, Alice B. Kornblith, Hyman B. Muss, Judith Wheeler, Ellis Levine, Nancy Bartlett, Gini Fleming, and Harvey J. Cohen

**Purpose:** Although 48% of breast cancer patients are 65 years old or older, these older patients are severely underrepresented in breast cancer clinical trials. This study tested whether older patients were offered trials significantly less often than younger patients and whether older patients who were offered trials were more likely to refuse participation than younger patients.

**Patients and Methods:** In 10 Cancer and Leukemia Group B institutions, using a retrospective case-control design, breast cancer patients eligible for an open treatment trial were paired: less than 65 years old and  $\geq 65$  years old. Each of the 77 pairs were matched by disease stage and treating physician. Patients were interviewed as to their reasons for participating or refusing to participate in a trial. The treating physicians were also given questionnaires about their reasons for offering or not offering a trial.

**Results:** Sixty-eight percent of younger stage II patients were offered a trial compared with 34% of the older patients ( $P = .0004$ ). In multivariate analyses, disease stage and age remained highly significant in predicting trial offering ( $P = .0008$ ), when controlling for physical functioning and comorbidity. Of those offered a trial, there was no significant difference in participation between younger (56%) and older (50%) patients ( $P = .67$ ).

**Conclusion:** In a multivariate analysis including comorbid conditions, age and stage were the only predictors of whether a patient was offered a trial. The greatest impediment to enrolling older women onto trials in the setting of this study was the physicians' perceptions about age and tolerance of toxicity.

*J Clin Oncol* 21:2268-2275. © 2003 by American Society of Clinical Oncology.

ALTHOUGH THE incidence of cancer increases with age, and in the United States 60% of cancers occur in people older than 65 years,<sup>1</sup> there are significantly fewer older cancer

cancer entered on clinical trials were older than 65 years, compared with 48% of breast cancer patients older than 65 years in the United States population (based on the Surveillance,

# Under-representation of elderly patients into surgical trials

Characteristic	Total no. of participants	Percentage of patients	Proportion of incident cancer patients in US in 2000 (%)
<b>Race/ethnicity</b>			
White	12,112	86.57	82.15
Hispanic	476	3.40	4.24
African-American	1,108	7.92	11.23
Asian/Pacific islander	260	1.86	2.16
American Indian/Alaskan native	35	0.25	0.22
Total	13,991	100	100 (687,183)
<b>Age (years)</b>			
21-44	2,313	16.53	4.91
45-54	3,950	28.23	11.82
55-64	3,929	28.08	20.84
65-74	2,883	20.61	30.78
75+	916	6.55	31.64
Total	13,991	100	100 (687,183)

Stewart JH Ann Surg Oncol 2007

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ARTICLE

# 766 postmenopausal ER+ women

## External Validity of a Trial Comprised of Elderly Patients With Hormone Receptor-Positive Breast Cancer

Willemien van de Water, Mandy Kiderlen, Esther Bastiaannet, Sabine Siesling, Rudi G. J. Westendorp, Cornelis J. H. van de Velde, Johan W. R. Nortier, Caroline Seynaeve, Anton J. M. de Craen, Gerrit-Jan Liefers  
Manuscript received July 31, 2013; revised January 28, 2014; accepted February 4, 2014.  
Correspondence to: Gerrit-Jan Liefers, MD, PhD, Department of Surgical Oncology, Leiden University Medical Center, Albinusdreef 2, PO Box 9600, 2300 RC Leiden, The Netherlands (e-mail: [g.j.liefers@lumc.nl](mailto:g.j.liefers@lumc.nl)).

### Background

Inclusion in trials is selective, and thus results may not be generalizable to the general population. The aim of this study was to investigate the external validity of randomized clinical trial outcomes for elderly breast cancer patients.

### Methods

We compared characteristics and outcomes of breast cancer patients (n = 1325) who participated in a randomized clinical trial (Tamoxifen Exemestane Adjuvant Multinational trial) with unselected breast cancer patients of corresponding age from the general population (n = 1056). Dutch patients aged 65 years or older at diagnosis of hormone receptor-positive breast cancer without distant metastases, with either nodal involvement, a tumor > 3 cm, or a 1 to 3 cm histological grade III tumor, who completed local therapy were included. Primary outcome was overall mortality. Hazard models were used to assess the association between covariables and overall mortality.

not for

general



# GO SAFE Study

**Geriatric Oncology Surgical Assessment  
and Functional rEcovery after Surgery**

 @GOSAFEstudy

**Multicenter international observational explorative prospective cohort study**

## INCLUSION CRITERIA

- patients  $\geq 75$  year old
- solid tumours
- elective surgery

## PRIMARY END POINT

postop functional recovery 3 and 12 months

## SECONDARY END POINTS

- postoperative morbidity and mortality
- mortality at 3 and 12 months after surgery
- Quality of Life at 3 and 12 months
- Identification of prognostic factors for functional recovery after surgery

# Long-term outcomes:



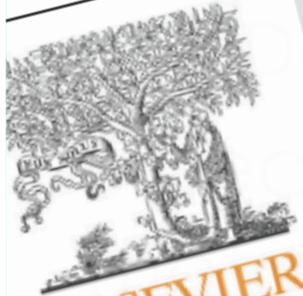
EURECC

European Journal of Cancer (2015) 51, 1221–1230

Available at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect

journal homepage: [www.ejancer.com](http://www.ejancer.com)

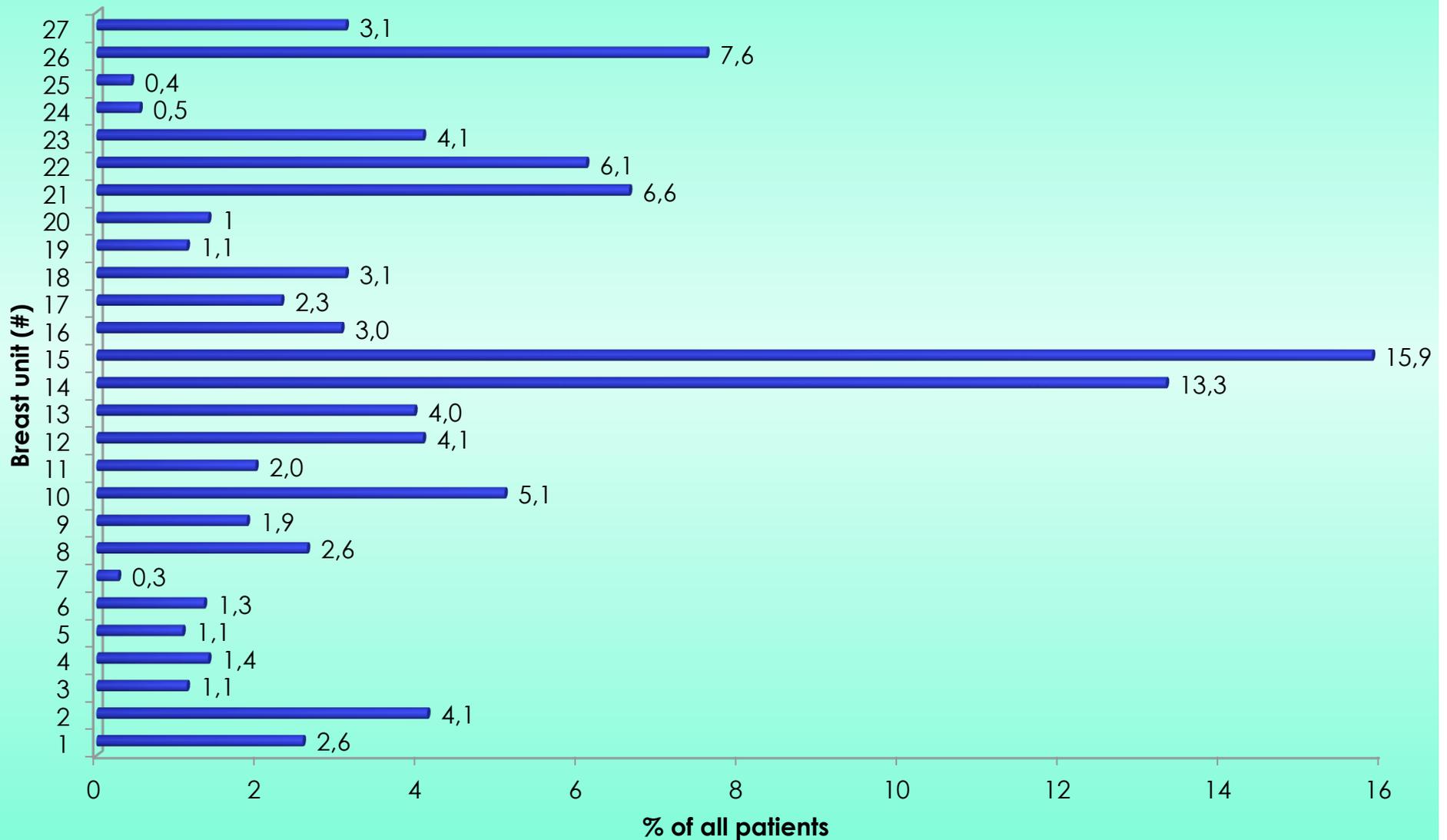


# Variations in compliance to quality indicators by age for 41,871 breast cancer patients across Europe: A European Society of Breast Cancer Specialists database analysis

Mandy Kiderlen<sup>a,b,c</sup>, Antonio Ponti<sup>d,e</sup>, Mariano Tomatis<sup>d,e</sup>, Petra G. Boelens<sup>a,b</sup>,  
Esther Bastiaannet<sup>a,b,c</sup>, Robin Wilson<sup>d,f</sup>, Cornelis J.H. van de Velde<sup>a,b,\*</sup>,  
Riccardo A. Audisio<sup>a,d,g,h</sup>, and the eusomaDB Working Group<sup>1</sup>

<sup>1</sup>Registration of Cancer Care (EURECCA), Leiden, The Netherlands  
<sup>2</sup>Leiden University Medical Center, Leiden, The Netherlands

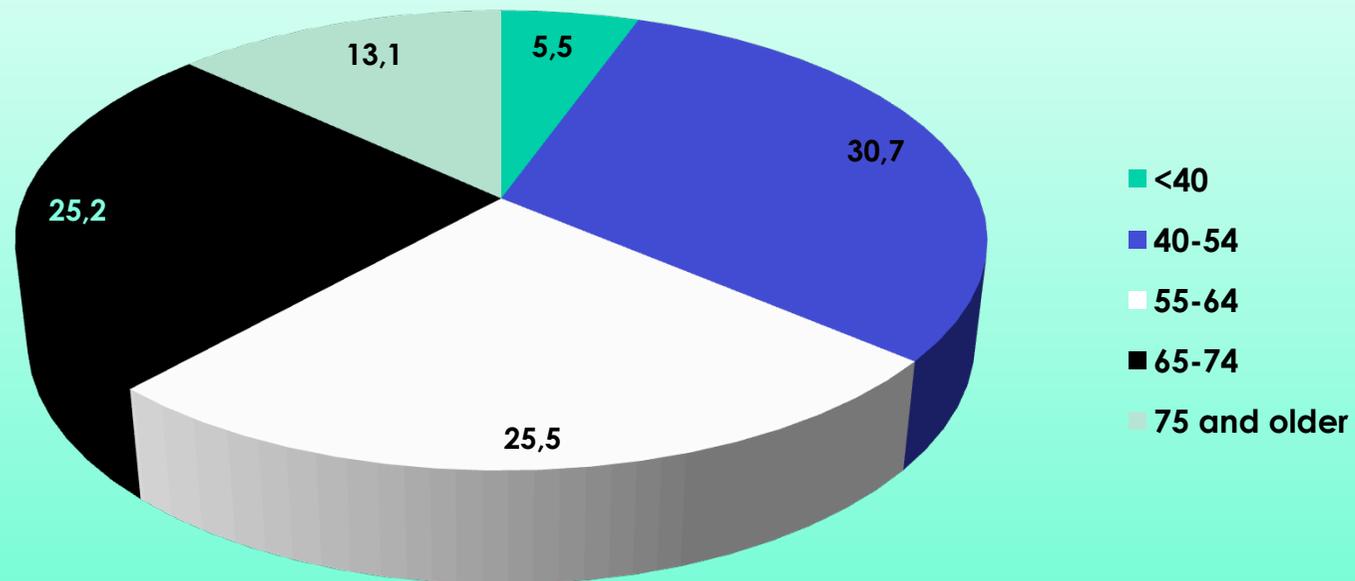
# patients/unit



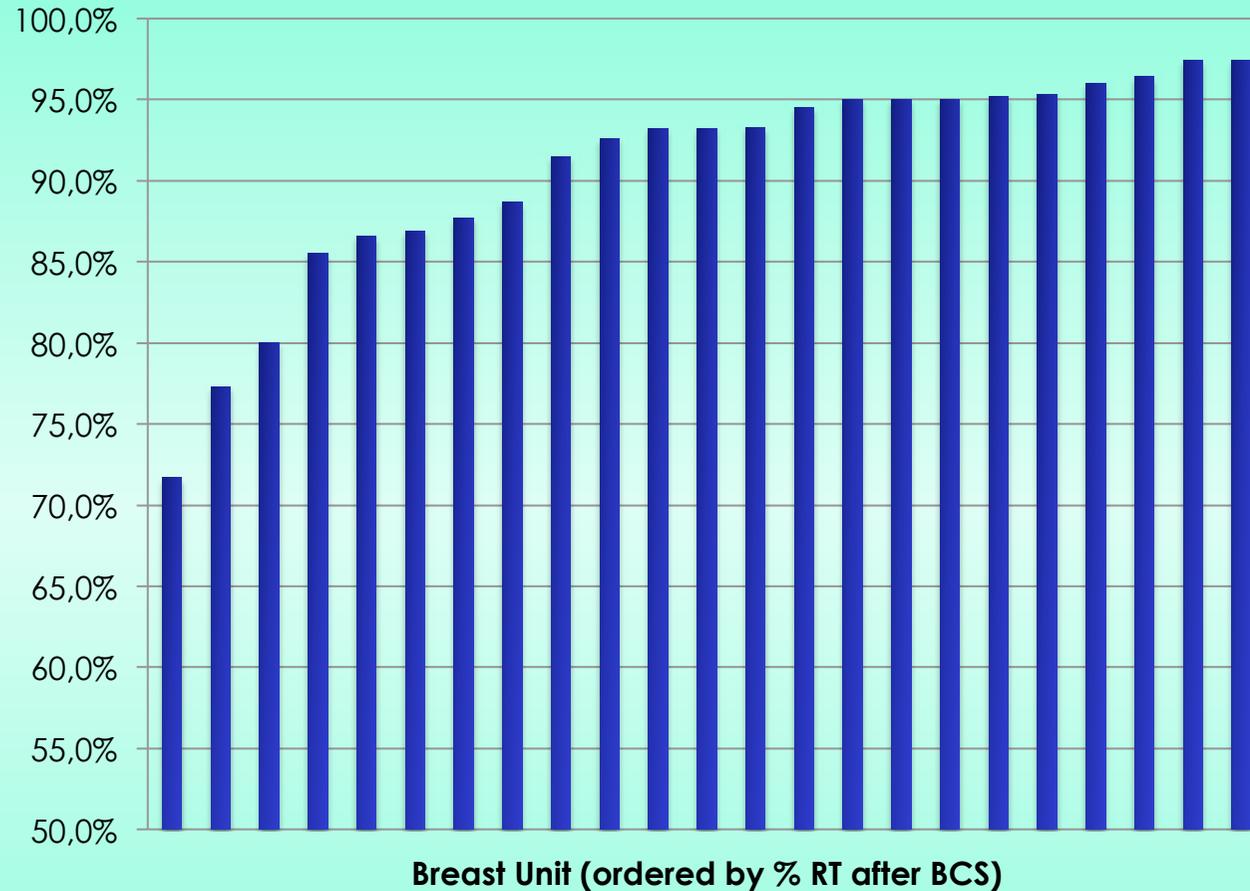
# age distribution

mean age: 59.8 years  
SD 12.9 years

Age distribution



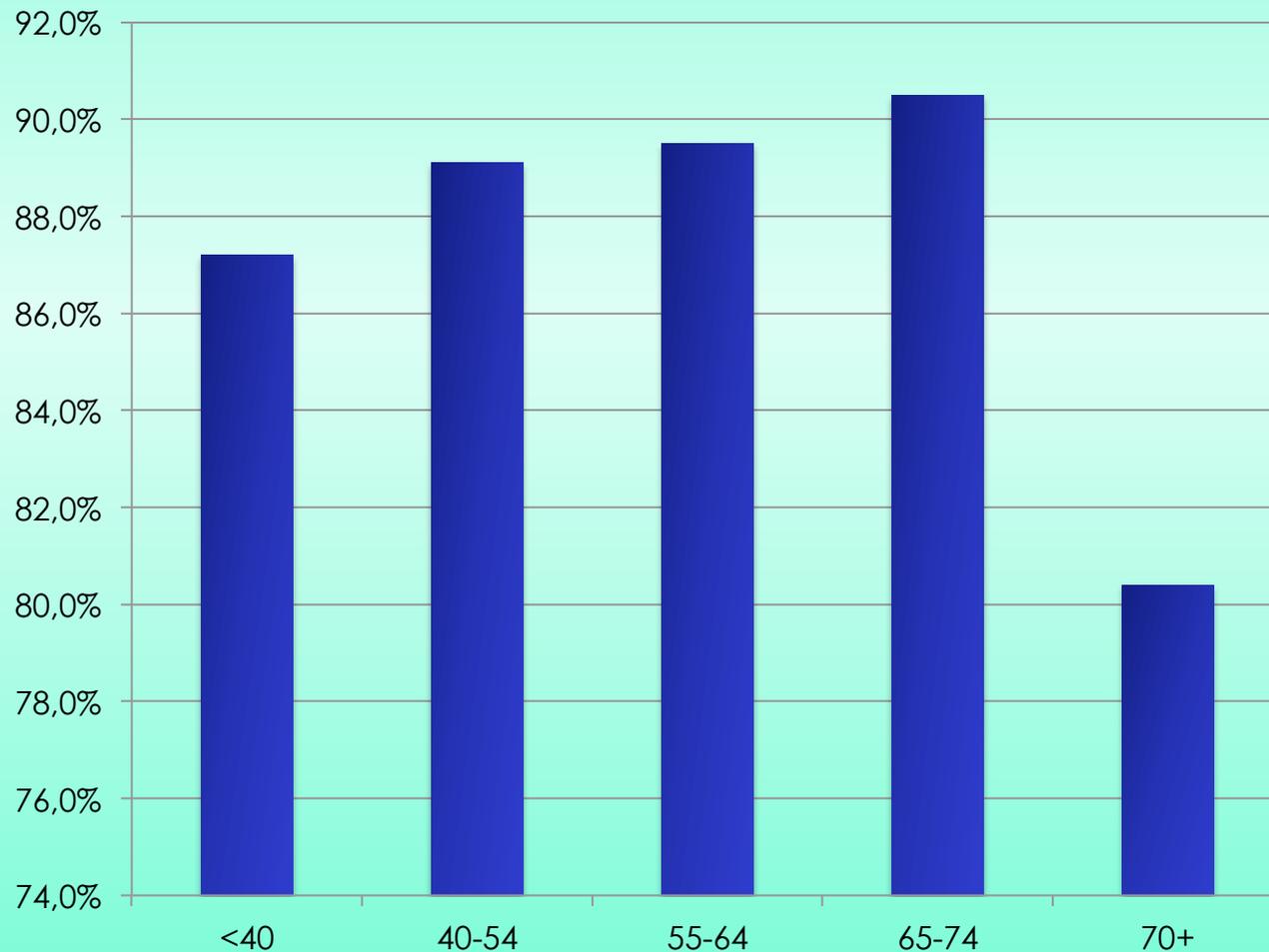
# BCS + RT



Multivariable  $P < 0,001$

All units: 17,376 (88.6%) patients had RT  
Range between units 72% - 97%

# BCS+RT age stratified

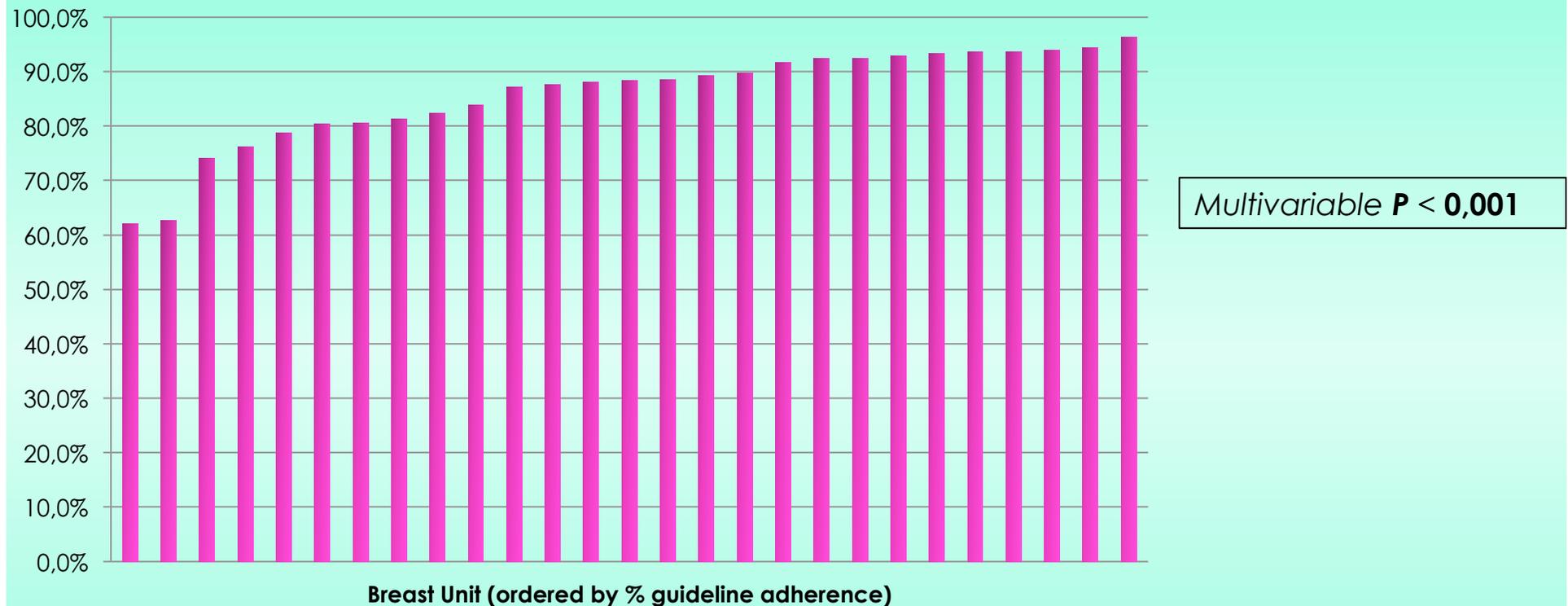


No statistical difference between units for patients aged <40 ( $p = 0.99$ )

Multivariable P for difference between units in the other age strata:

**<0.001**

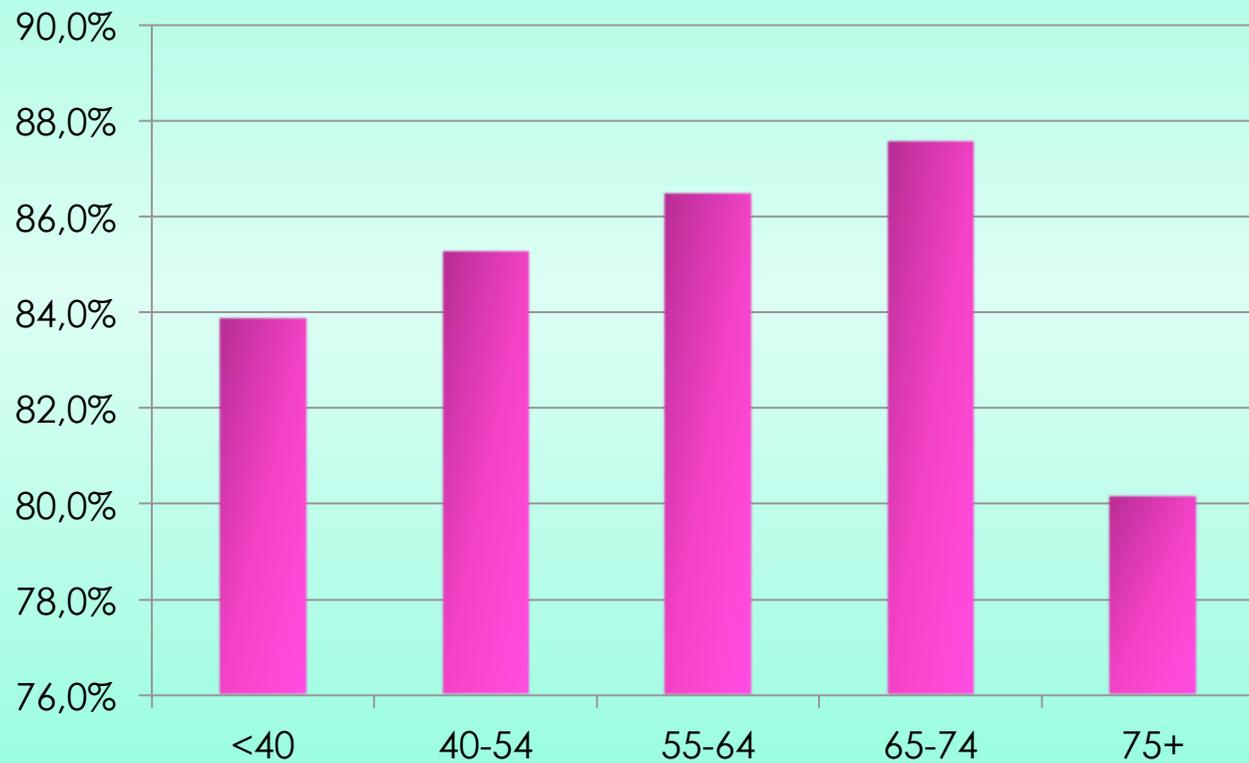
# “guidelines adherence” locoregional therapy



All units: 29,235 (85.5%) patients had guideline-adherent locoregional treatment

Range between units 62%-96%

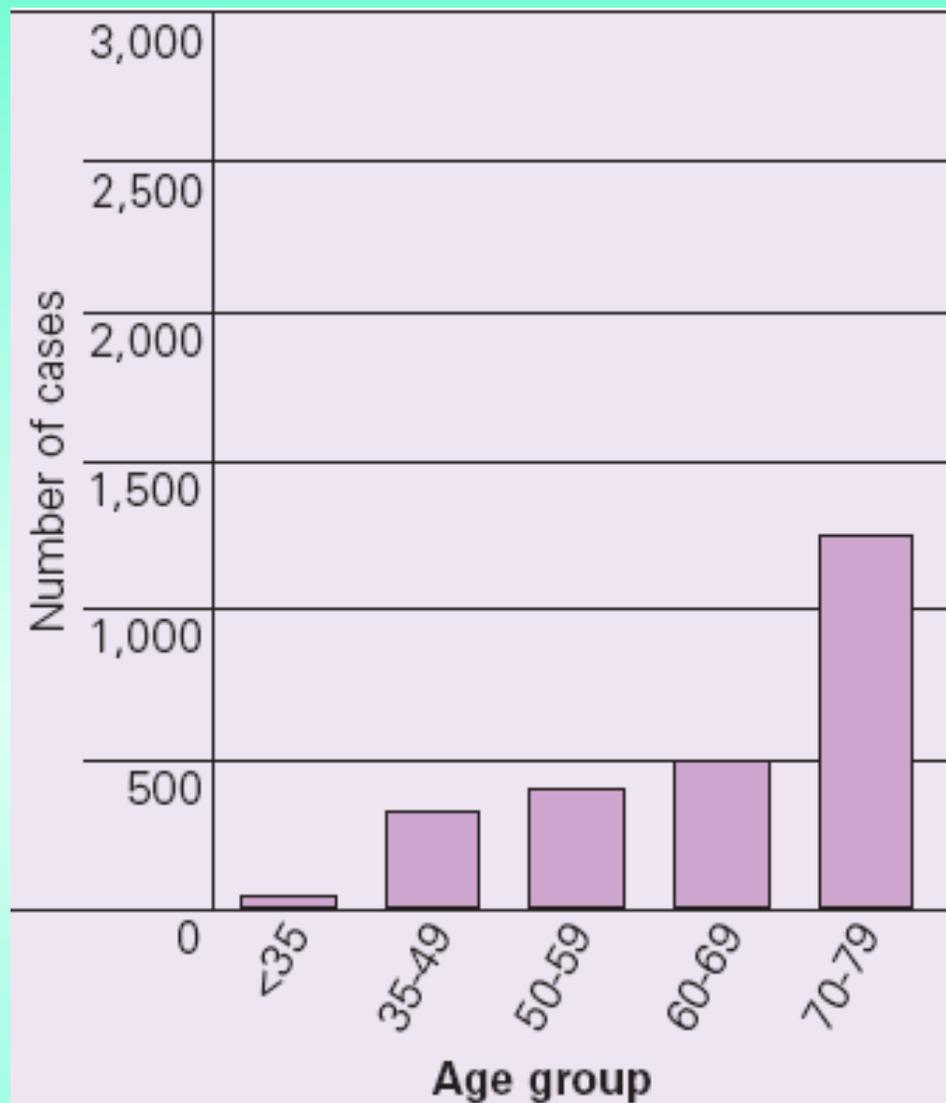
# “guidelines adherence” age-stratified



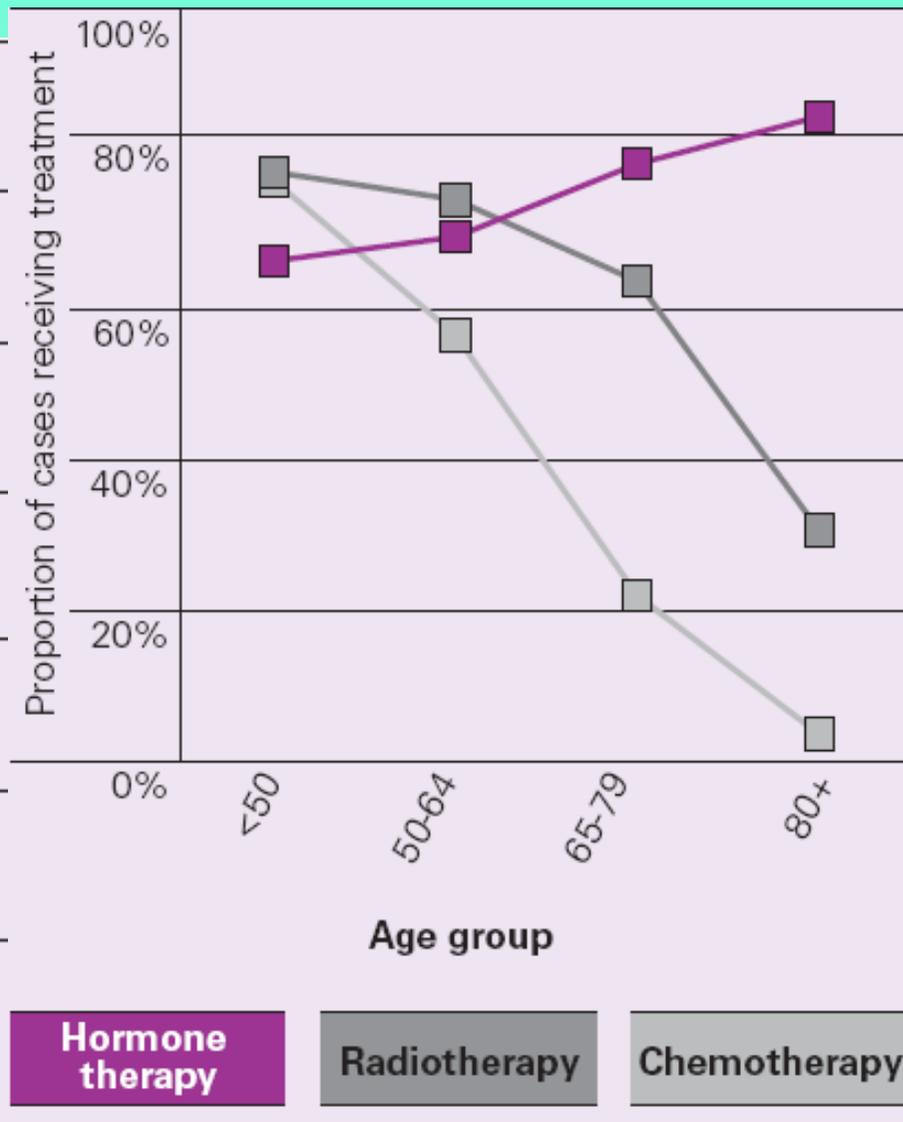
*Multivariable P  
for difference  
between units in  
each age  
stratum:*

**<0.001**





**Figure 22: Variation with age at diagnosis in the number of cases submitted to BCCOM in 2002–2004 undergoing surgical treatment**



**Figure 24: Variation in adjuvant treatment with age group for all cases submitted to BCCOM in 2002–2004 with known treatment**



## Validity of Adjuvant! Online program in older patients with breast cancer: a population-based study

Nienke A de Glas, Willemien van de Water, Ellen G Engelhardt, Esther Bastiaannet, Anton JM de Craen, Judith R Kroep, Hein Putter, Anne M Stiggelbout, Nir I Weijl, Cornelis J H van de Velde, Johanneke E A Portielje, Gerrit-Jan Liefers

### Summary

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May 14, 2014

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See [Comment](#) page 672

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Prof C J H van de Velde PhD,

G-J Liefers PhD), Department of

Gerontology and Geriatrics

(NA de Glas, W van de Water,

E Bastiaannet,

**Background** Adjuvant! Online is a prediction tool that can be used to aid clinical decision making in patients with breast cancer. It was developed in a patient population aged 69 years or younger, and subsequent validation studies included small numbers of older patients. Since older patients with breast cancer differ from younger patients in many aspects, the aim of this study was to investigate the validity of Adjuvant! Online in a large cohort of unselected older patients.

**Methods** We included patients from the population-based FOCUS cohort, which included all consecutive patients aged 65 years or older who were diagnosed with invasive or in-situ breast cancer between Jan 1, 1997, and Dec 31, 2004, in the southwestern part of the Netherlands. We included all patients who fulfilled the criteria as stated by Adjuvant! Online: patients with unilateral, unicentric, invasive adenocarcinoma; no evidence of metastatic or residual disease; no evidence of T4 features; and no evidence of inflammatory breast cancer. We entered data from all patients with the “average for age” comorbidity status (model 1) and with an individualised comorbidity status (model 2).



# Geographical Variations

1995-2005

Stage I-II

Breast Cancer Res Treat (2012) 132:675–682

DOI 10.1007/s10549-011-1892-5

EPIDEMIOLOGY

## Surgical treatment of early stage breast cancer in elderly: an international comparison

M. Kiderlen · E. Bastiaannet · P. M. Walsh · N. L. Keating · S. Schrodi ·  
J. Engel · W. van de Water · S. M. Ess · L. van Eycken · A. Miranda ·  
L. de Munck · C. J. H. van de Velde · A. J. M. de Craen · G. J. Liefers

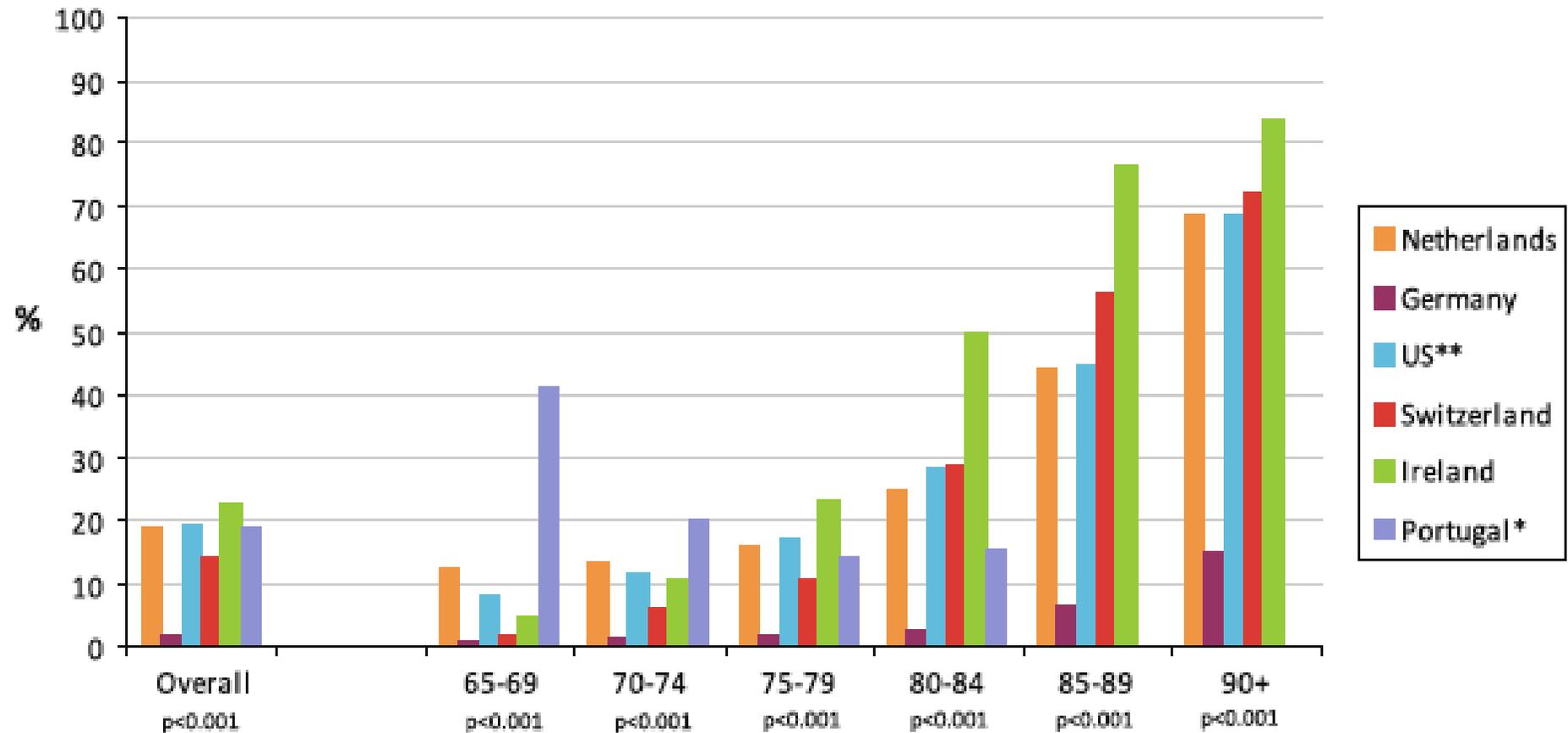
Received: 16 November 2011 / Accepted: 18 November 2011 / Published online: 27 November 2011

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**Abstract** Over 40% of breast cancer patients are diagnosed above the age of 65. Treatment of these elderly patients will probably vary over countries. The aim of this study was to make an international comparison (several

204.885 patients were included. The proportion of patients not receiving any surgery increased with age in many countries; however, differences between countries were large. In most countries more than half of all elderly

# Geographical Variations

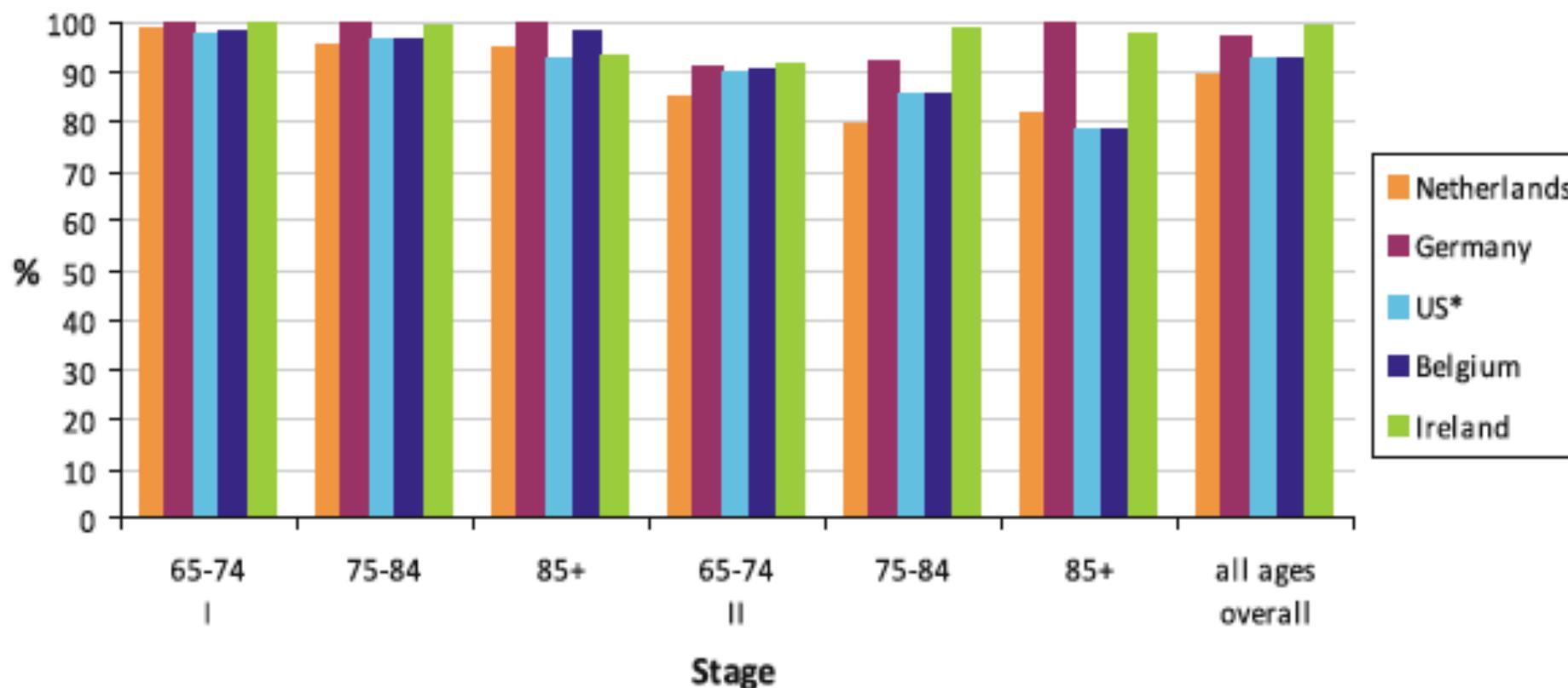


\*Less than 50 patients in the selection

\*\*Missing 9.8%

## NO axillary surgery

# Geographical Variations



**relative survival**

## Impact of omission of surgery on survival of older patients with breast cancer

N. A. de Glas<sup>1</sup>, J. M. Jonker<sup>3</sup>, E. Bastiaannet<sup>1,2</sup>, A. J. M. de Craen<sup>2</sup>, C. J. H. van de Velde<sup>1</sup>, S. Siesling<sup>4,6</sup>, G.-J. Liefers<sup>1</sup>, J. E. A. Portielje<sup>7</sup> and M. E. Hamaker<sup>5</sup>

Departments of <sup>1</sup>Surgery and <sup>2</sup>Gerontology and Geriatrics, Leiden University Medical Centre, Leiden, <sup>3</sup>Department of Geriatric Medicine, Rijnland Ziekenhuis, Leiderdorp, <sup>4</sup>Department of Research, Comprehensive Cancer Centre, and <sup>5</sup>Department of Geriatric Medicine, Diakonessenhuis Utrecht, Utrecht, <sup>6</sup>MIRA Institute of Technical Medicine and Biomedical Technology, University of Twente, Enschede, and <sup>7</sup>Department of Internal Medicine, Haga Hospital, The Hague, The Netherlands

*Correspondence to:* Dr M. E. Hamaker, Department of Geriatric Medicine, Diakonessenhuis Utrecht/Zeist/Doorn, Professor Lorentzlaan 76, 3707 HL Zeist, The Netherlands (e-mail: mhamaker@diakhuis.nl)

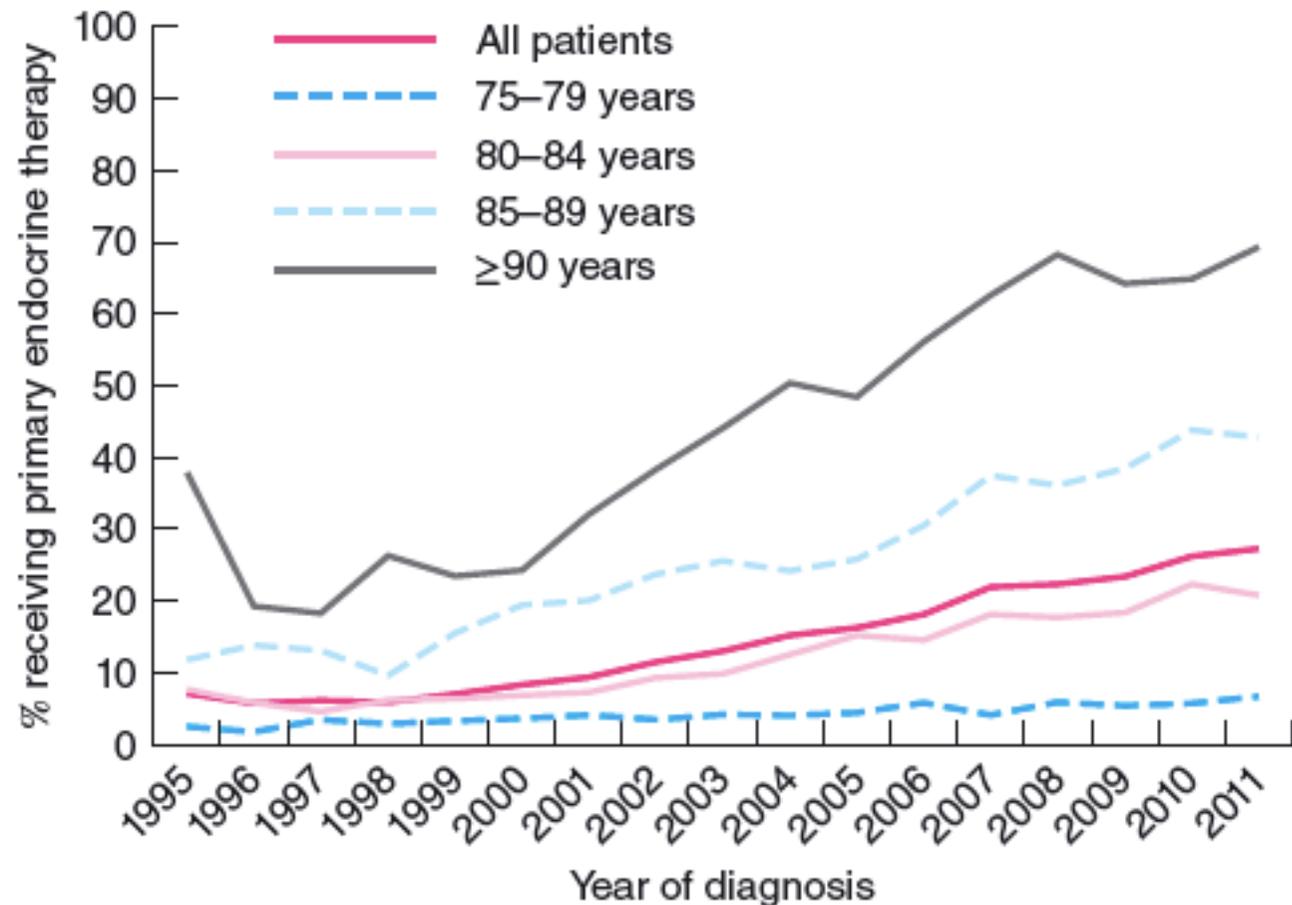
**Background:** Older patients with breast cancer are often not treated in accordance with guidelines. With the emergence of endocrine therapy, omission of surgery can be considered in some patients. The aim of this population-based study was to investigate time trends in surgical treatment between 1995 and 2011, and to evaluate the effects of omitting surgery on overall and relative survival in older patients with resectable breast cancer.

**Methods:** Patients aged 75 years and older with stage I–III breast cancer diagnosed between 1995 and 2011 were selected from the Netherlands Cancer Registry. Time trends of all treatment modalities were evaluated using linear regression models. Changes in overall survival were calculated by Cox regression. Relative survival was calculated using the Ederer II method.

**Results:** Overall, 26 292 patients were included. The proportion of patients receiving surgical treatment decreased significantly, from 90.8 per cent in 1995 to 69.9 per cent in 2011 ( $P < 0.001$ ). Multivariable analysis showed that overall survival did not change over time (hazard ratio 1.00 (95 per cent confidence interval (c.i.) 0.99 to 1.00) per year); nor did relative survival (relative excess risk 1.00 (0.98 to 1.02) per year).

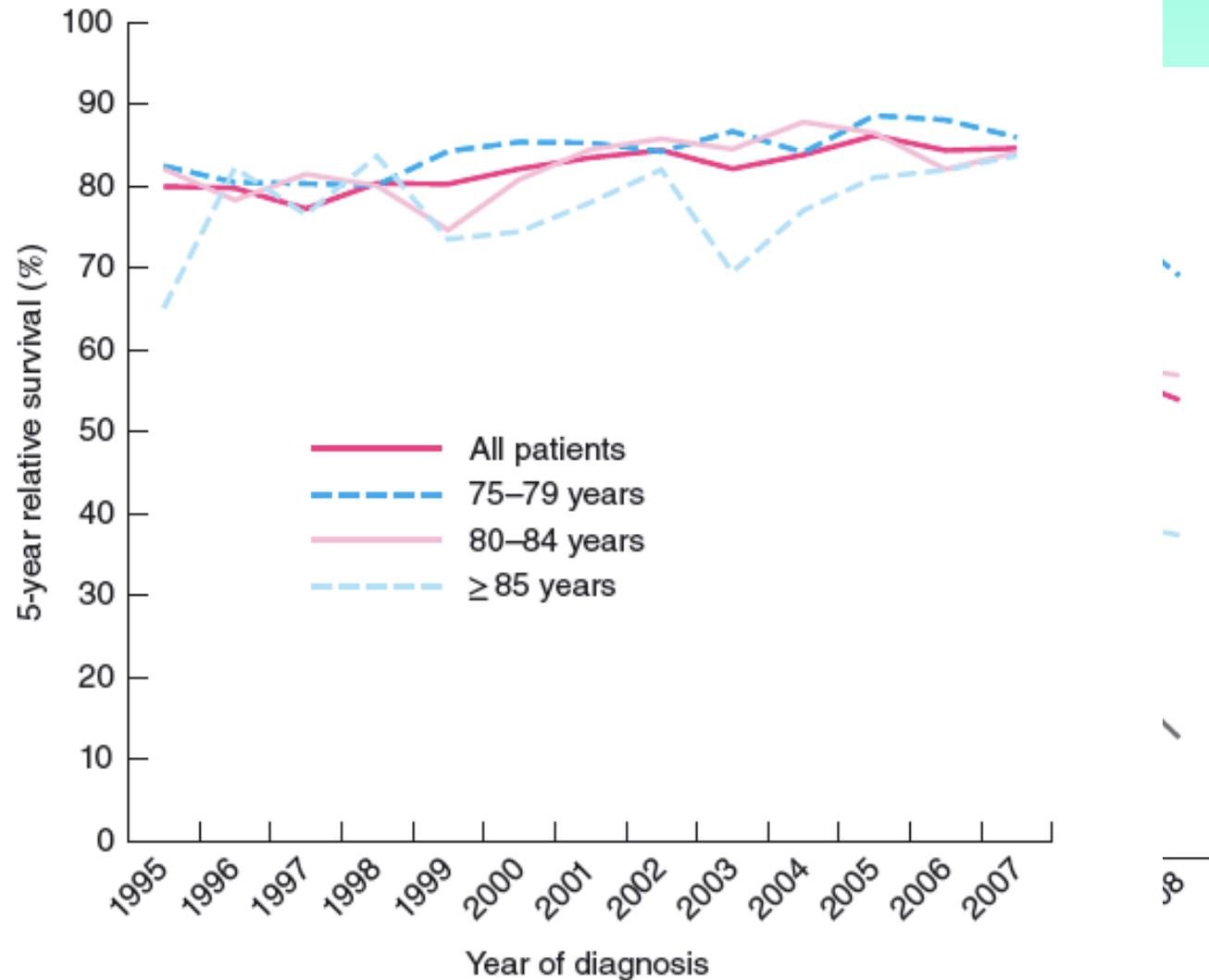
# NO surgery

## More PET in the Netherland over the last 15 years



# NO surgery

No decreased overall- and relative- survival



ORIGINAL ARTICLE – BREAST ONCOLOGY

## Predictors and Outcomes of Completion Axillary Node Dissection Among Older Breast Cancer Patients

Sara H. Javid, MD<sup>1</sup>, Hao He, PhD<sup>1</sup>, Larissa A. Korde, MD, MPH<sup>2</sup>, David R. Flum, MD, MPH<sup>1</sup>, and Benjamin O. Anderson, MD<sup>1</sup>

<sup>1</sup>Departments of Surgery, University of Washington, Seattle, WA; <sup>2</sup>Medicine, University of Washington, Seattle, WA

### ABSTRACT

**Background.** The role of completion axillary lymph node dissection (ALND) for older women who had sentinel lymph node-positive (SLN+) invasive breast cancer is unclear. We examined factors predictive of ALND and the association between ALND, adjuvant chemotherapy administration, and survival.

**Methods.** Using the Surveillance, Epidemiology, and End Results (SEER)-Medicare database, we reviewed records of women age >65 diagnosed with stage I/II breast cancer from 1998–2005. Adjusted Cox proportional hazards and multivariate logistic regression were used to identify patient and disease variables associated with ALND, and

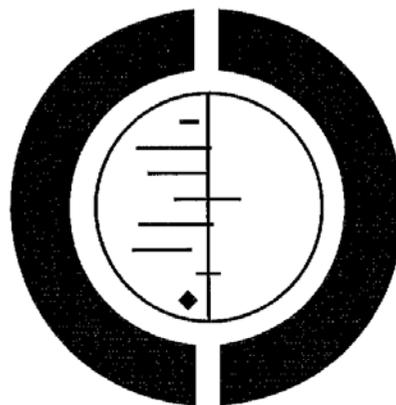
**Conclusions.** ALND for older patients with SLN+ breast cancer is not associated with improved 5-year all-cause or breast cancer-specific survival. Younger age, fewer comorbidities, and estrogen receptor-negative (ER-) status were more strongly associated with receipt of chemotherapy than ALND. Consideration should be given to omitting ALND in older patients, particularly if findings of ALND will not influence adjuvant therapy decisions.

### INTRODUCTION

Nearly half of all breast cancer cases diagnosed each

**Surgery versus primary endocrine therapy for operable  
primary breast cancer in elderly women (70 years plus)  
(Review)**

Hind D, Wyld L, Beverley C, Reed MW



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This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in *The Cochrane Library* 2008, Issue 3

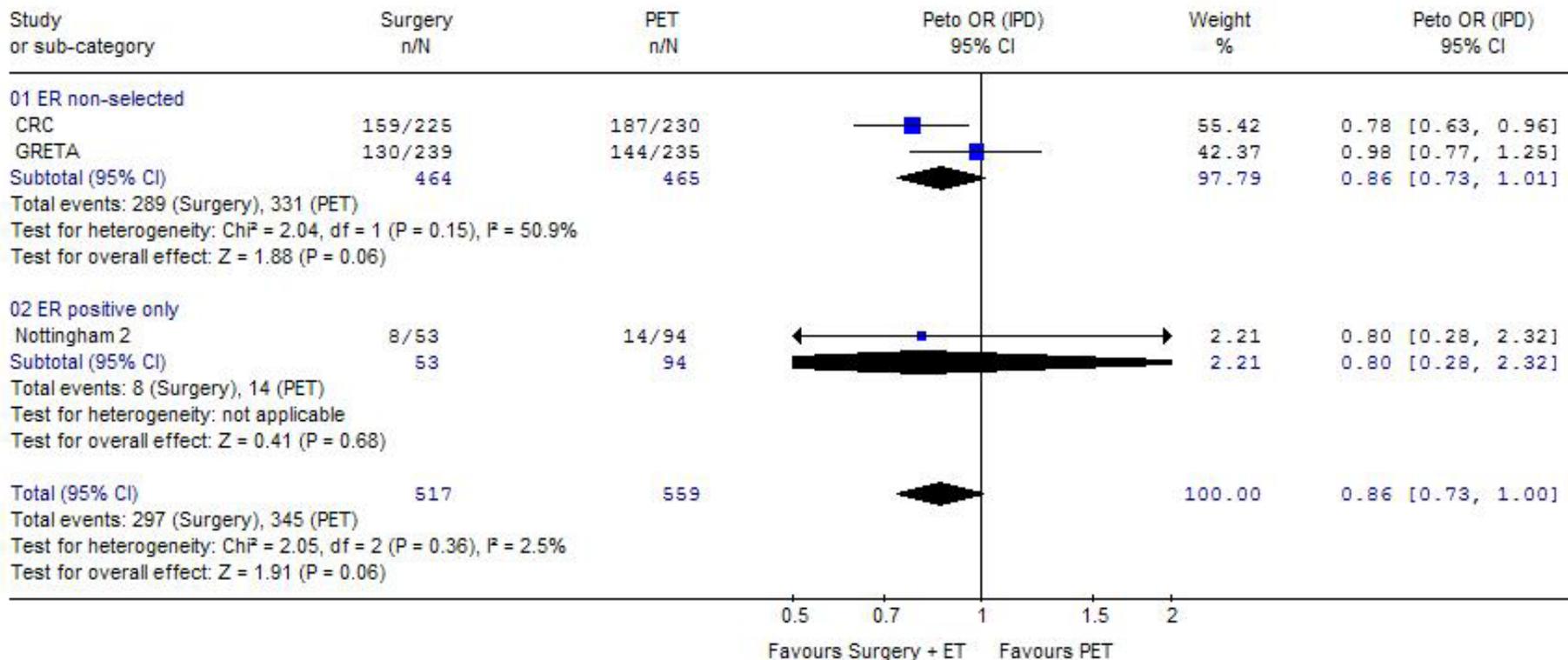
<http://www.thecochranelibrary.com>



# Overall Survival

## Surgery+ET vrs PET

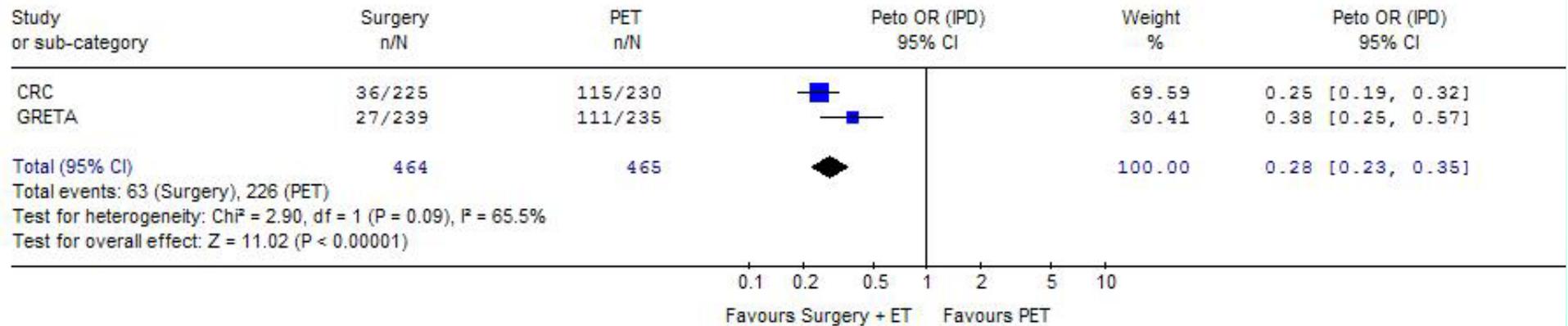
Review: Surgery versus primary endocrine therapy for operable primary breast cancer in elderly women (70+).  
 Comparison: 02 Surgery plus endocrine therapy versus primary endocrine therapy  
 Outcome: 01 Survival - overall



# Local Disease Control

## Surgery+ET vrs PET

Review: Surgery versus primary endocrine therapy for operable primary breast cancer in elderly women (70+).  
 Comparison: 02 Surgery plus endocrine therapy versus primary endocrine therapy  
 Outcome: 04 Local disease control



# When to use Primary Endocrine Therapy?

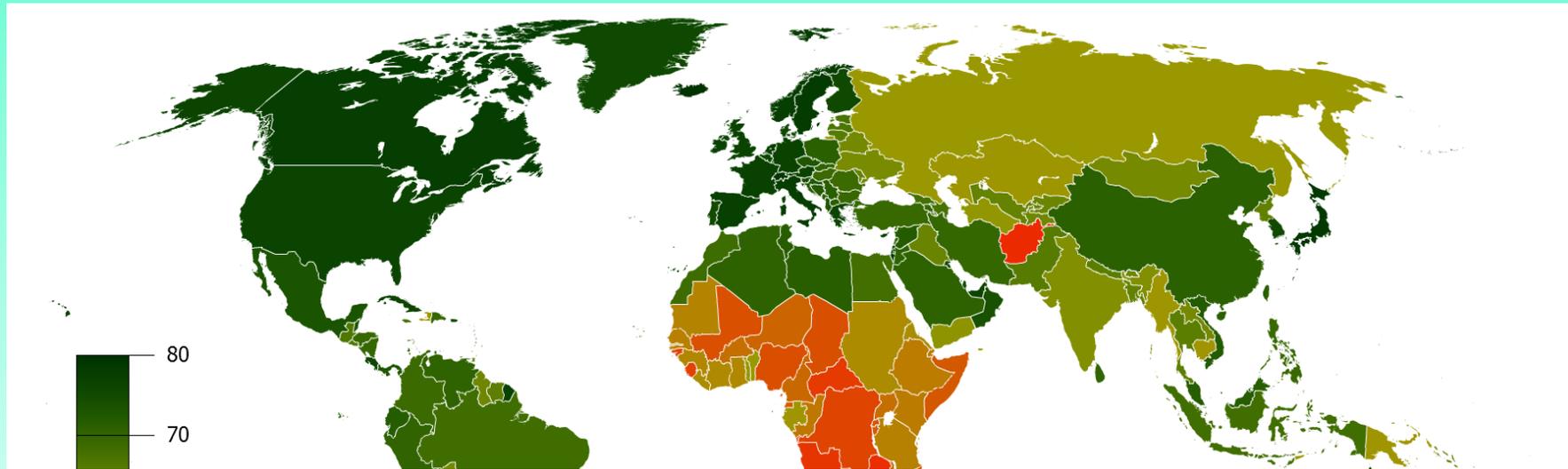
1. Converting mastectomy into BCS
2. Prehabilitation
3. Non-operable patients (???)

# **Primary Endocrine Therapy**

**Compliance is ~ 50%**

**Resistance to TAM (up to 50%)**

**Duration of response 2-3 years**



## UK life expectancy at 65 reaches record level

**Published:** Tuesday, 21 November 2006



Life expectancy at age 65 in the United Kingdom has reached its highest level ever for both men and women, according to figures released by National Statistics today.

Men aged 65 could expect to reach 81 and women to 84 if mortality rates remained the same as they were in 2003-05.

Within the United Kingdom, life expectancy varies by country. The highest expectations of life at age 65 occurred in England at 16.8 years for men and 19.6 years for women and the lowest in Scotland at 15.5 years and 18.4 years respectively. The equivalent figures for Wales and Northern Ireland are a little lower than those for England.

Life expectancy at birth is also at its highest level for both males and females. Boys and girls born in the United Kingdom could expect on average to live to 76.6 years and 81.0 years of age respectively.

The increase in life expectancy among older adults has been particularly dramatic in recent years. Between 1980-82 and 2003-05 life expectancy at age 65 in the United Kingdom increased by 3.7 years for males and 2.5 years for females. Around one-third of this increase occurred over the last five years.

# Surgery



# Surgery: 1<sup>st</sup> choice treatment



# Surgery to the breast

?? Mastectomy ??? Lumpectomy ??

not “evidence based”: Fisher & Veronesi

safe margins & 20-30% breast volume

feasibility of RT “social” mastectomy

patient’s request cosmetics

# Genetic Surgery



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Controversy

## Breast reconstruction in elderly women breast cancer: A review

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Outcomes

### SUMMARY

**Introduction:** The elderly population is rapidly increasing, and with cancer, particularly breast cancer, being most prevalent in this group, its management is becoming increasingly important. A major aspect of breast cancer treatment and subsequent quality of life is the opportunity for reconstructive surgery post-mastectomy. This is particularly important as survival rates are improving, so a larger proportion of patients are living with the long term consequences of their treatment. Evidence has shown that age itself is not a risk factor for poor surgical outcomes, but concern over this causes surgeons to be wary of offering elderly patients the opportunity of reconstruction. Elderly patients themselves are also less likely to request or accept reconstruction.

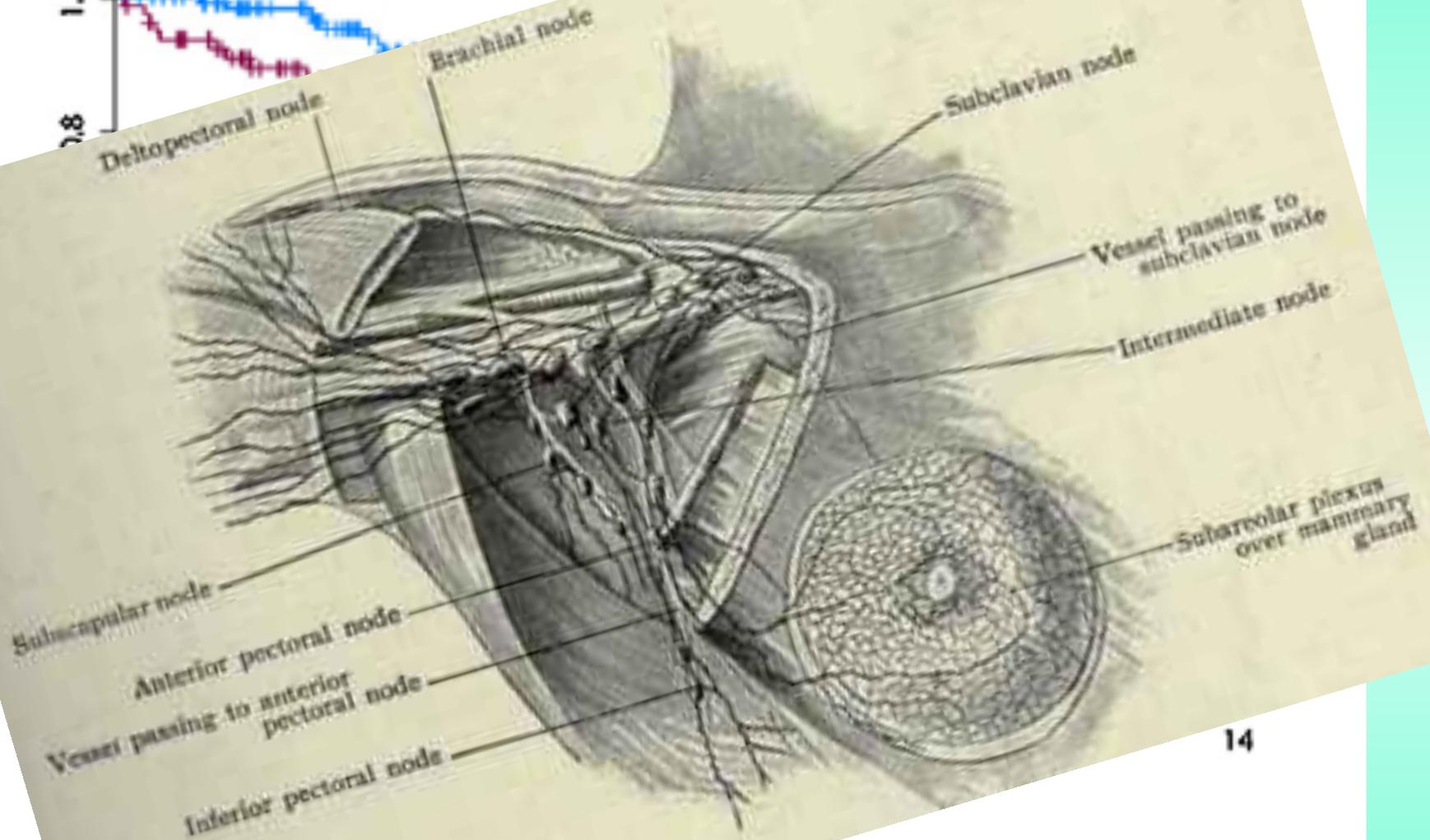
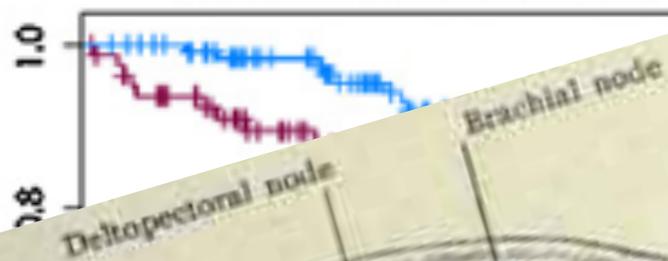
**Methods:** Literature searches using keywords 'breast reconstruction', 'older' and 'elderly' were carried out on Pubmed, Scopus and Google Scholar. Duplicates were removed and a series of articles were reviewed, searched to exclude irrelevant articles. Results were limited to English language, and then manually reviewed to exclude irrelevant articles. Results were limited to English language, and then manually reviewed to exclude irrelevant articles.

**Results:** Surgery was well tolerated in elderly patients, with complication rates comparable to a younger group. Autogenous tissue produced better outcomes than implant reconstruction. In areas such as functioning and emotional wellbeing, patients with reconstructive surgery showed better outcomes than those without.

**Discussion:** The research on this topic is limited and only available in the form of a retrospective comparison between these series cannot be drawn. The available data suggests that elderly patients should not be denied reconstructive surgery. Despite this, the evidence strength is limited and further research should be conducted.

recon

# Disease Specific Survival by Node



**axillary surgery vs not**

# **Tailored Breast Surgery**

**axillary recurrence: “a  
surgical failure”**

**morbidity of axillary  
dissection... ?**

**SLNB**

**low axillary sampling**

# Axillary surgery Y/N

## Is Axillary Lymph Node Dissection Necessary in Elderly Patients with Breast Carcinoma Who Have a Clinically Uninvolved Axilla?

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Giuseppe De Palo, M.D.<sup>1</sup>

Danila Coradini, Ph.D.<sup>3</sup>

Bruno Salvadori, M.D.<sup>4</sup>

Roberto Zucali, M.D.<sup>5</sup>

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**BACKGROUND.** Axillary dissection in elderly patients with early-stage breast carcinoma who do not have palpable axillary lymph nodes is controversial because of the associated morbidity of the surgery, reduced life expectancy of the patients, and efficacy of hormone therapy in preventing recurrences and axillary events.

**METHODS.** The authors performed a retrospective analysis of 671 consecutive patients with breast carcinoma who were age  $\geq 70$  years and who underwent conservative breast surgery with axillary dissection (172 patients) or without axillary dissection (499 patients). Tamoxifen always was given. The effects of axillary dissection compared with no axillary dissection on breast carcinoma mortality and distant metastasis were analyzed using multiple proportional-hazards regression models. Because the assignment to axillary treatment was nonrandom, covariate adjustments were made for baseline variables that influenced the decision to perform axillary dissection and for prognostic factors.

**RESULTS.** The crude cumulative incidence curves for breast carcinoma mortality and distant metastasis did not appear to differ significantly between the two groups ( $P = 0.530$  and  $P = 0.840$ , respectively). The crude cumulative incidences of axillary lymph node occurrence at 5 years and 10 years were 4.4% and 5.9%, respectively (3.1% and 4.1%, respectively, for patients with pT1 tumors).

**CONCLUSIONS.** Elderly patients with breast carcinoma who have no evidence of axillary lymph node involvement may be treated effectively with conservative surgery and tamoxifen. Immediate axillary dissection is not necessary but should be performed in the small percentage of patients who later develop overt axillary

**go-go**



**slow-go**

**no-go**



# fit – vulnerable - frail



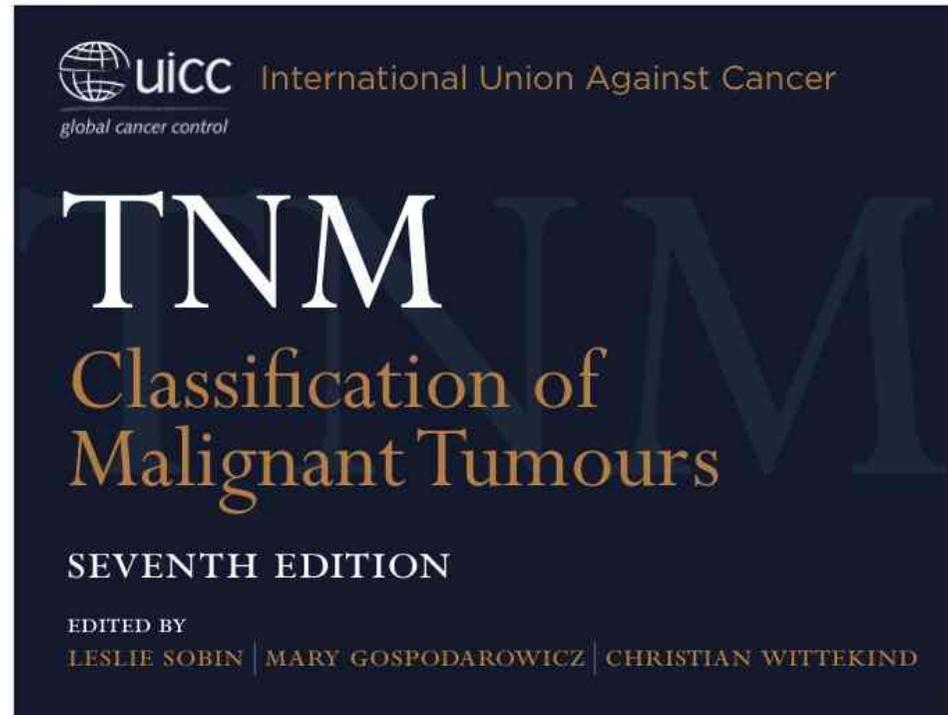
**Definition**

**Prediction**

**Individual**

**Comorbidity**

**Diagnosis**



**Special in:**



**Studies/Trials**

# Patient's preference (?)



# Tailored Breast Surgery



# Key points

**Awareness**



**Phase IV Trials**

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