APLICACION DE LAS GUIAS DE PREVENCION CARDIOVASCULAR EN LA PRACTICA CLINICA

Implementation of European Guidelines on CVD prevention: needs, potential and perspectives

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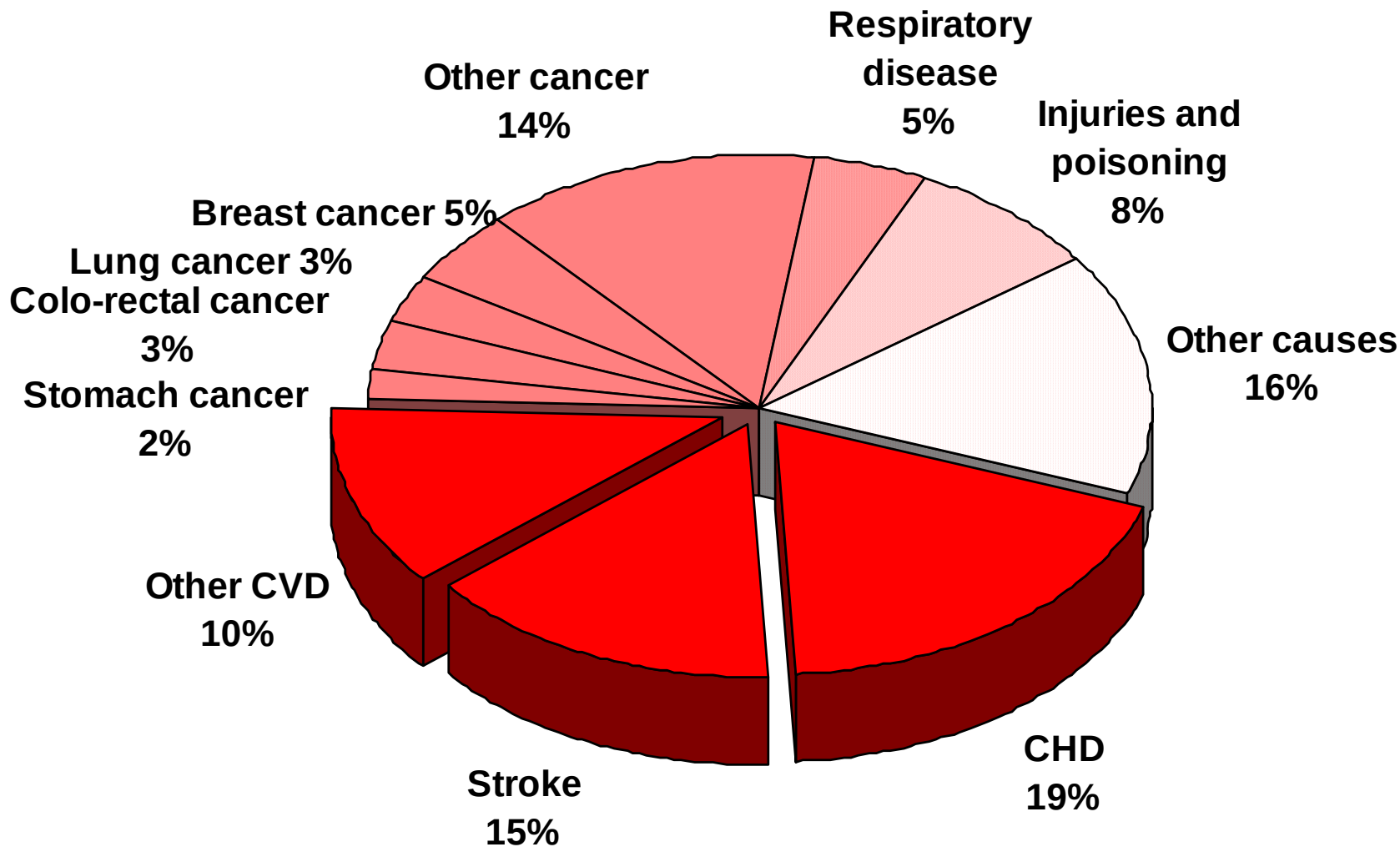
CVD PREVENTION

- The continuous need for prevention
- The potential for CVD prevention
- Do guidelines make a difference?
- Limitations and future perspectives

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Deaths by cause, women aged under 75, latest available year, Europe



CVD as an important cause of chronic work incapacity

Belgium 2003:

Workforce < 65 yrs: 3 477 544

> 1yr work incapacity: 200 703

because of CVD: 19 983 (10%)

Costs of CVD in Europe*

Estimated at 169 Billion Euro/year or

3724 Euro per capita/year
62% direct costs
21% productivity costs
17% informal care to CVD patients

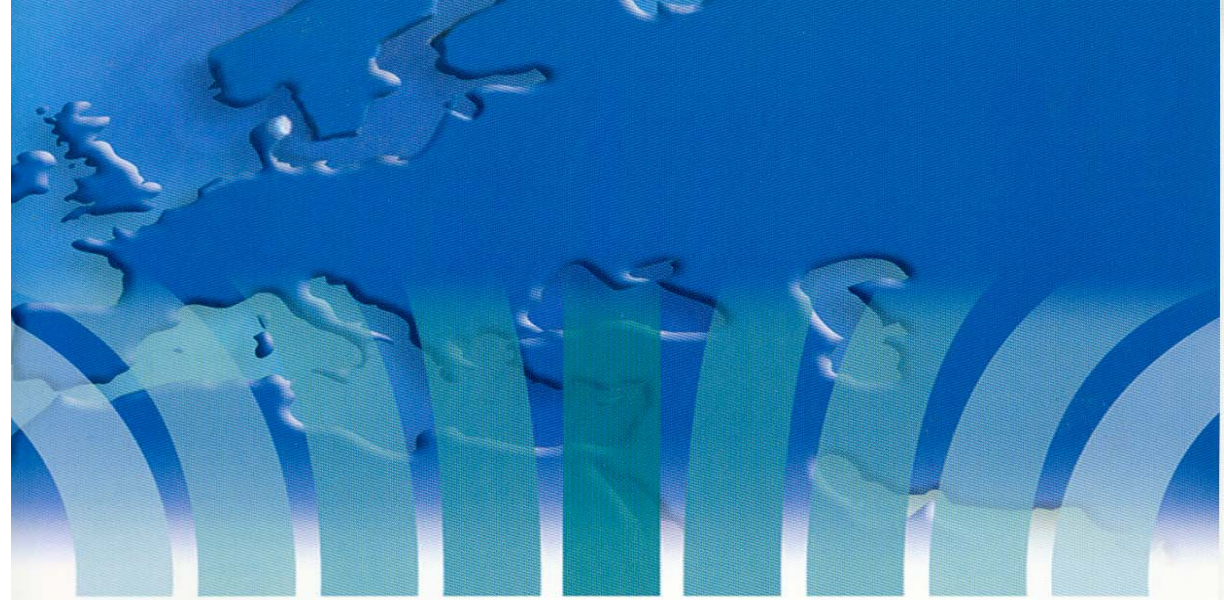
Spain :

7,0 billion Euro/year or 7,1 % of total health expenditure

* Eur Heart J 2006. Leal J et al

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EUROPEAN GUIDELINES

ON CVD PREVENTION

EXECUTIVE SUMMARY

ESC Committee for Practice Guidelines

To improve the quality of clinical practice and patient care in Europe

THIRD JOINT EUROPEAN SOCIETIES' TASK FORCE ON

CARDIOVASCULAR DISEASE PREVENTION IN CLINICAL PRACTICE

EASD European Association for the Study of Diabetes

ISFM

International Diabetes Federation

Wonca World Family doctors Caring for people EUROPE

ESH

EUROPEAN SOCIETY OF CARDIOLOGY

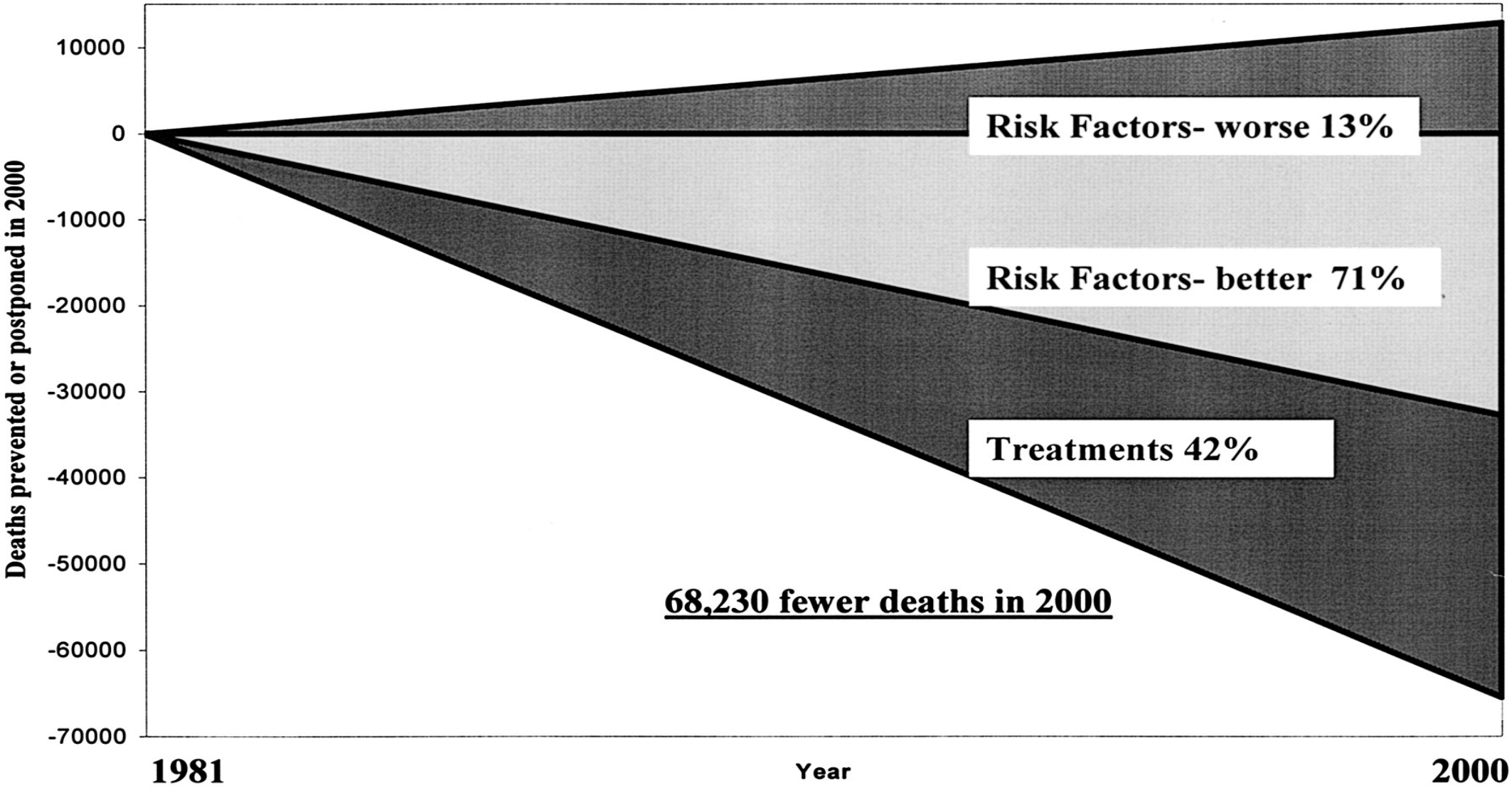
Reprinted from the European Heart Journal

www.eurheartj.org

Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study

"Abnormal lipids, smoking, hypertension, diabetes, abdominal obesity, psychosocial factors, consumption of fruits, vegetables and alcohol and regular physical activity account for 90 % of the PAR in men and 94% in women."

Lancet, September 3, 2004

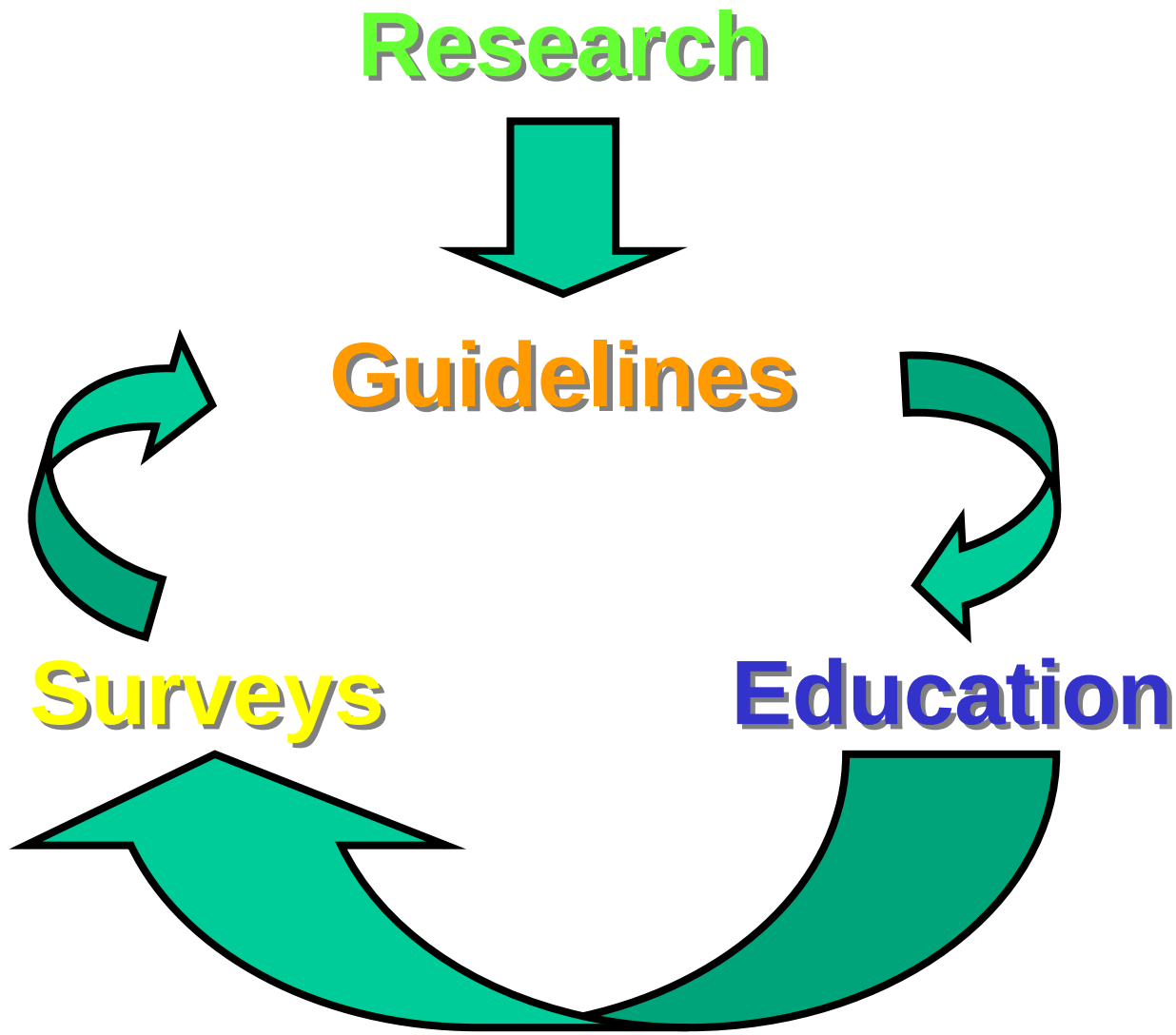


CHD deaths prevented or postponed by treatments and risk factor changes in England and Wales population, 1981 to 2000

Circulation 2004;109:1101

CVD PREVENTION

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- ***Do guidelines make a difference?***
- Limitations and future perspectives


Research
Guidelines
Education
Surveys

CVD Prevention: do guidelines make a difference?

Guidelines by themselves may not make the difference

BUT

they can be very helpful as a part of a global strategy of evidence-based preventive cardiology

CVD PREVENTION

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- ***Limitations and future perspectives***

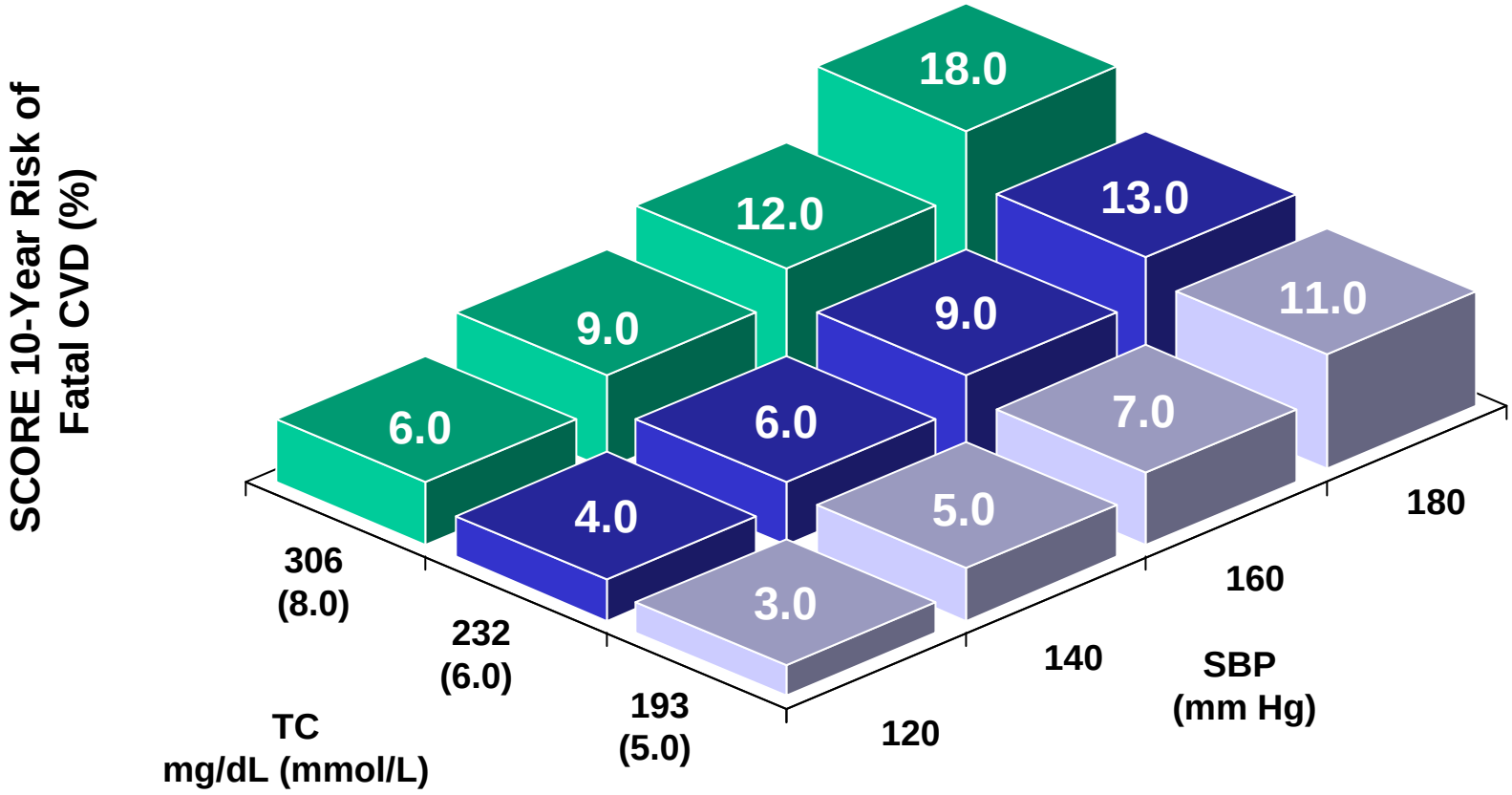
Total CV risk estimation

Total CV risk estimation is of fundamental importance because:

- CVD is multifactorial in origin
- Risk factors interact synergetically
- Physicians see people, not isolated risk factors

Systolic Blood Pressure and Cholesterol Have an Additive Effect on Risk of CVD Death

Male nonsmoker aged 60 years from a high-risk country



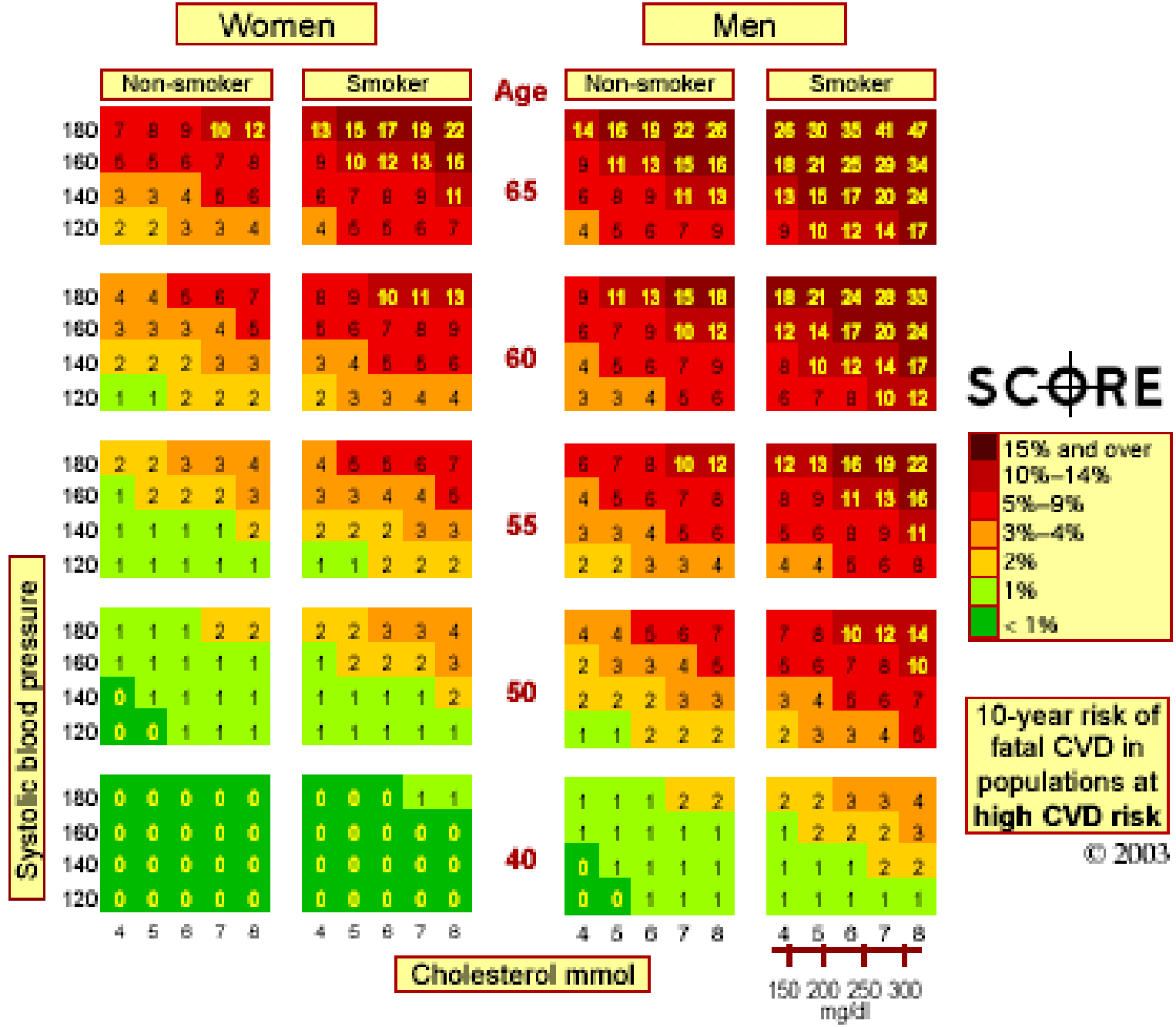
SBP = systolic blood pressure; SCORE = Systematic Coronary Risk Evaluation System; TC = total cholesterol.

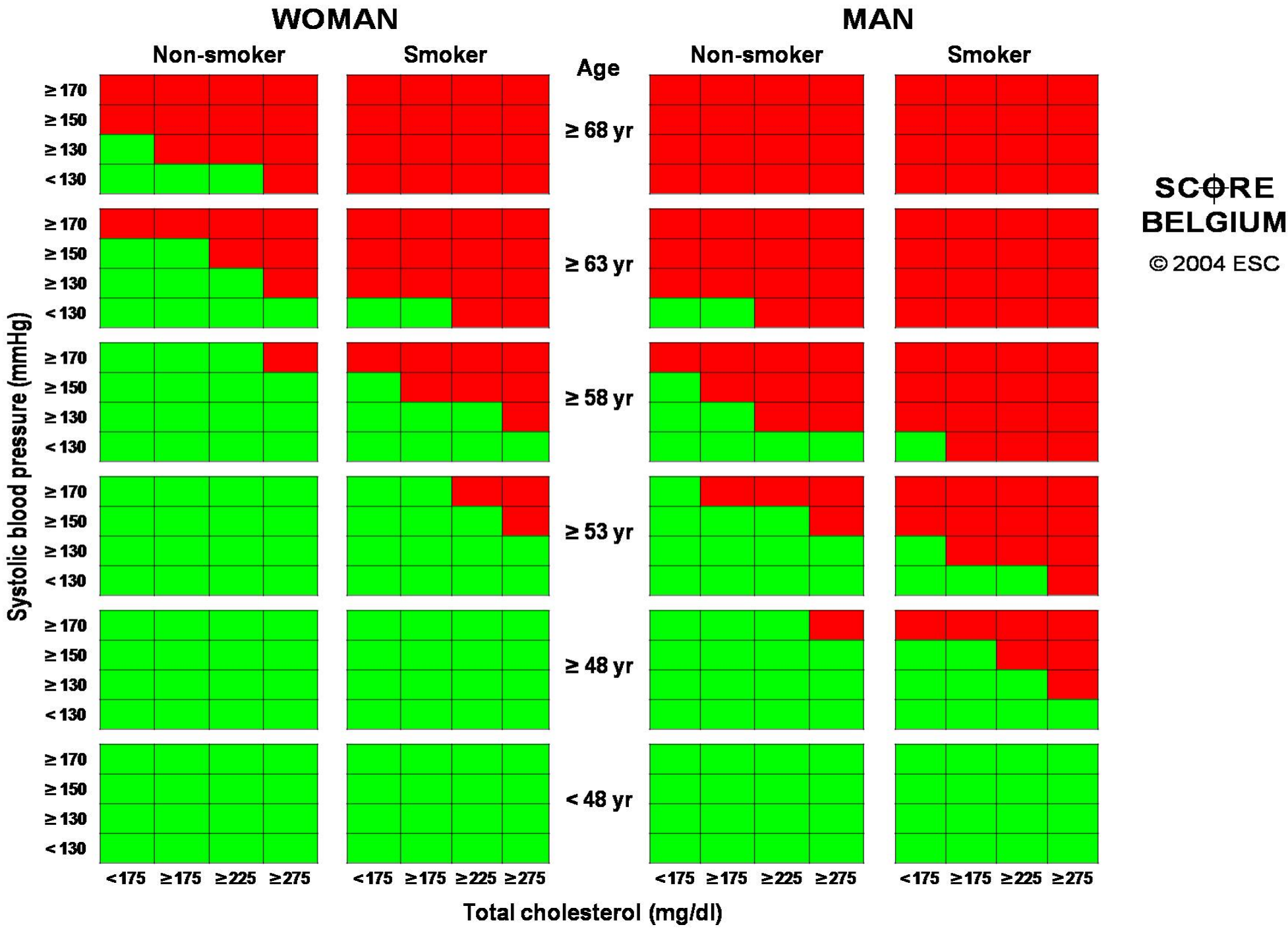
Adapted from De Backer G et al. *Eur Heart J*. 2003;24:1601-1610.

Total cardiovascular risk as a guide to preventive strategies

Preventive actions should be guided in accordance to the total CVD risk level.

Those at highest total risk should be identified and targeted for intensive lifestyle interventions and, when appropriate, for drug therapies


Women
Men
Non-smoker
Smoker
Non-smoker
Smoker
Age
65
60
55
50
40
Systolic blood pressure
180 160 140 120
4 5 6 7 8
Cholesterol mmol
150 200 250 300
mg/dl
SCORE
15% and over
10%–14%
5%–9%
3%–4%
2%
1%
< 1%
10-year risk of fatal CVD in populations at high CVD risk
© 2003


WOMAN
MAN
Non-smoker
Smoker
Non-smoker
Smoker
Age
≥ 68 yr
≥ 63 yr
≥ 58 yr
≥ 53 yr
≥ 48 yr
< 48 yr
≥ 170
≥ 150
≥ 130
< 130
Systolic blood pressure (mmHg)
<175
≥175
≥225
≥275
Total cholesterol (mg/dl)
SCORE
BELGIUM
© 2004 ESC

Dichotomous approach in medicine

Hypertension versus Normotension

Hypercholesterolemia versus Normal Cholesterol

Diabetes versus No Diabetes

High Total CV risk versus Low Total CV risk

Prevalence of low-risk profile BELSTRESS I cohort

BP < 130/80 mmHg

Tot chol < 190 mg/dl

Non- or ex-smoker

BMI < 25 kg/m^2

Prevalence of low-risk profile BELSTRESS I cohort

BP < 130/80 mmHg

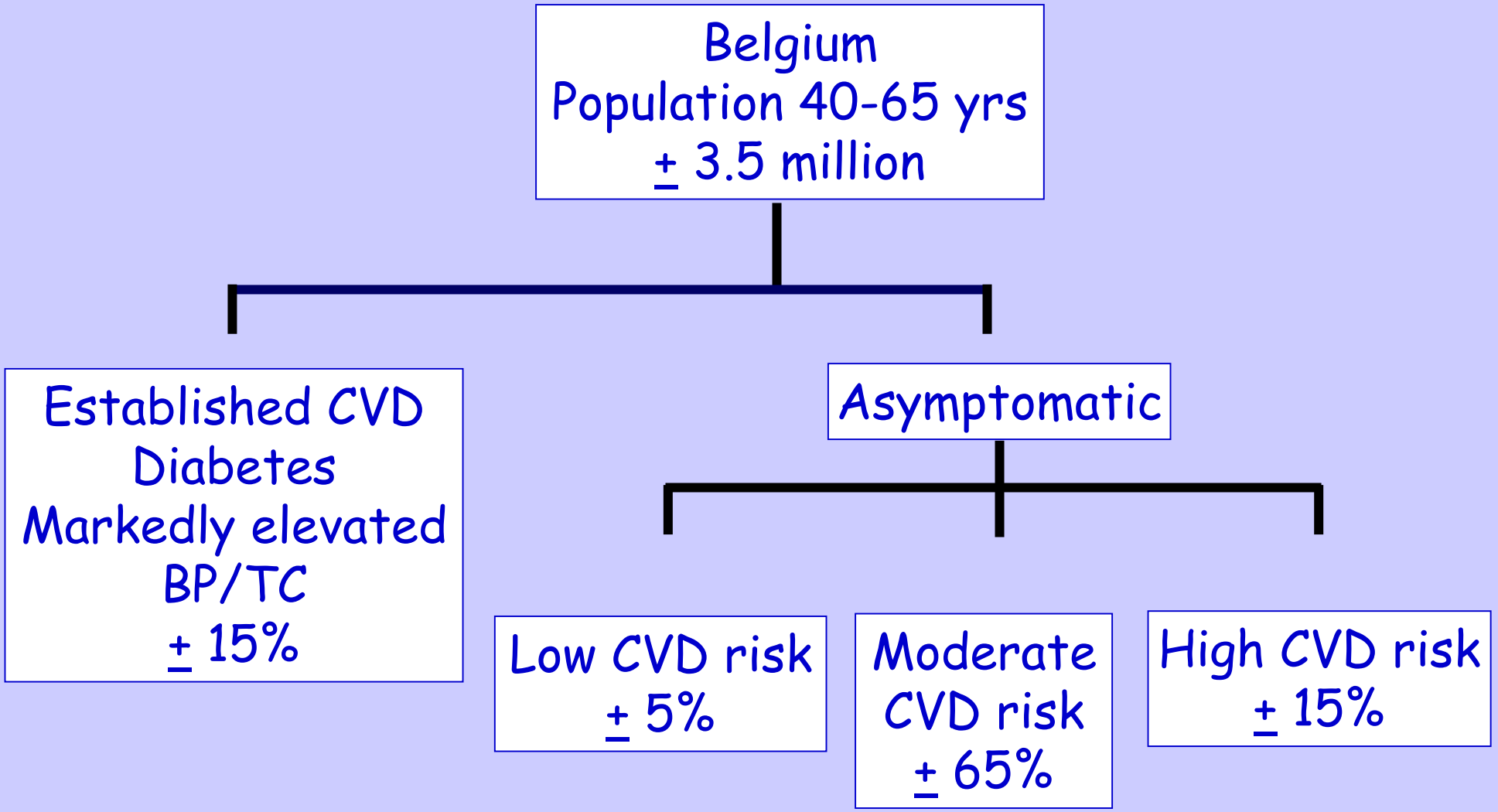
Tot chol < 190 mg/dl

Non- or ex-smoker

BMI < 25 kg/m^2

Men= 2.2%

Women= 6.9%


Belgium
Population 40-65 yrs
± 3.5 million
Established CVD
Diabetes
Markedly elevated
BP/TC
± 15%
Asymptomatic
Low CVD risk
± 5%
Moderate
CVD risk
± 65%
High CVD risk
± 15%

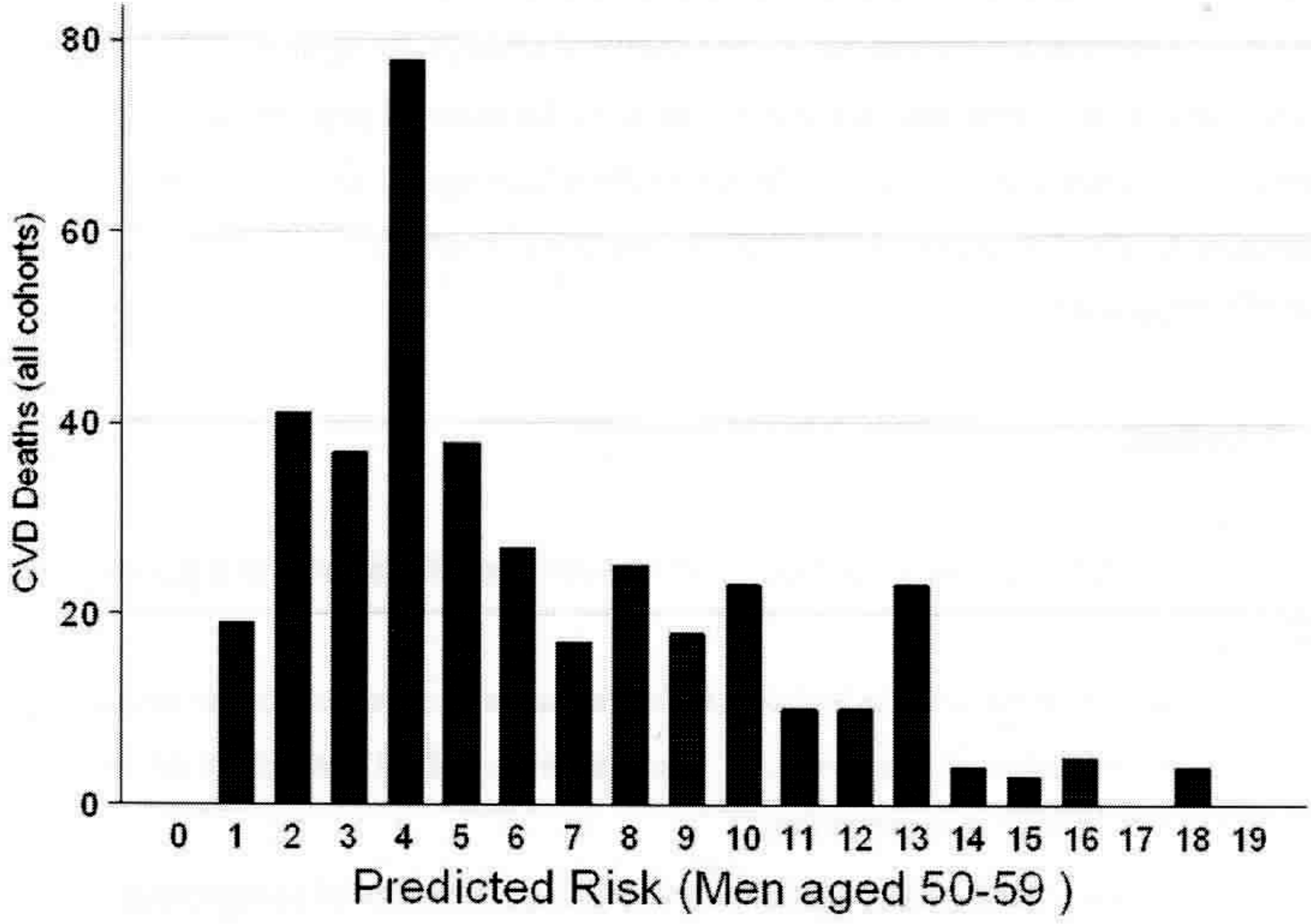


Figure 1. The expected number of CVD Deaths at increasing levels of predicted risk. Illustration of the fact that most events occur in low risk subjects with few deaths among high risk subjects

Total cardiovascular risk as a guide to preventive strategies

Preventive actions should be guided in accordance to the total CVD risk level.

Highest Risk: intensive lifestyle intervention + drug therapy in a majority

High Risk: intensive lifestyle intervention + drug therapy when appropriate

Modest Risk: lifestyle intervention targeting at optimal risk profile

Low Risk: keep it as low as possible

Total cardiovascular risk as a guide to preventive strategies

Preventive actions should be guided in accordance to the total CVD risk level

But

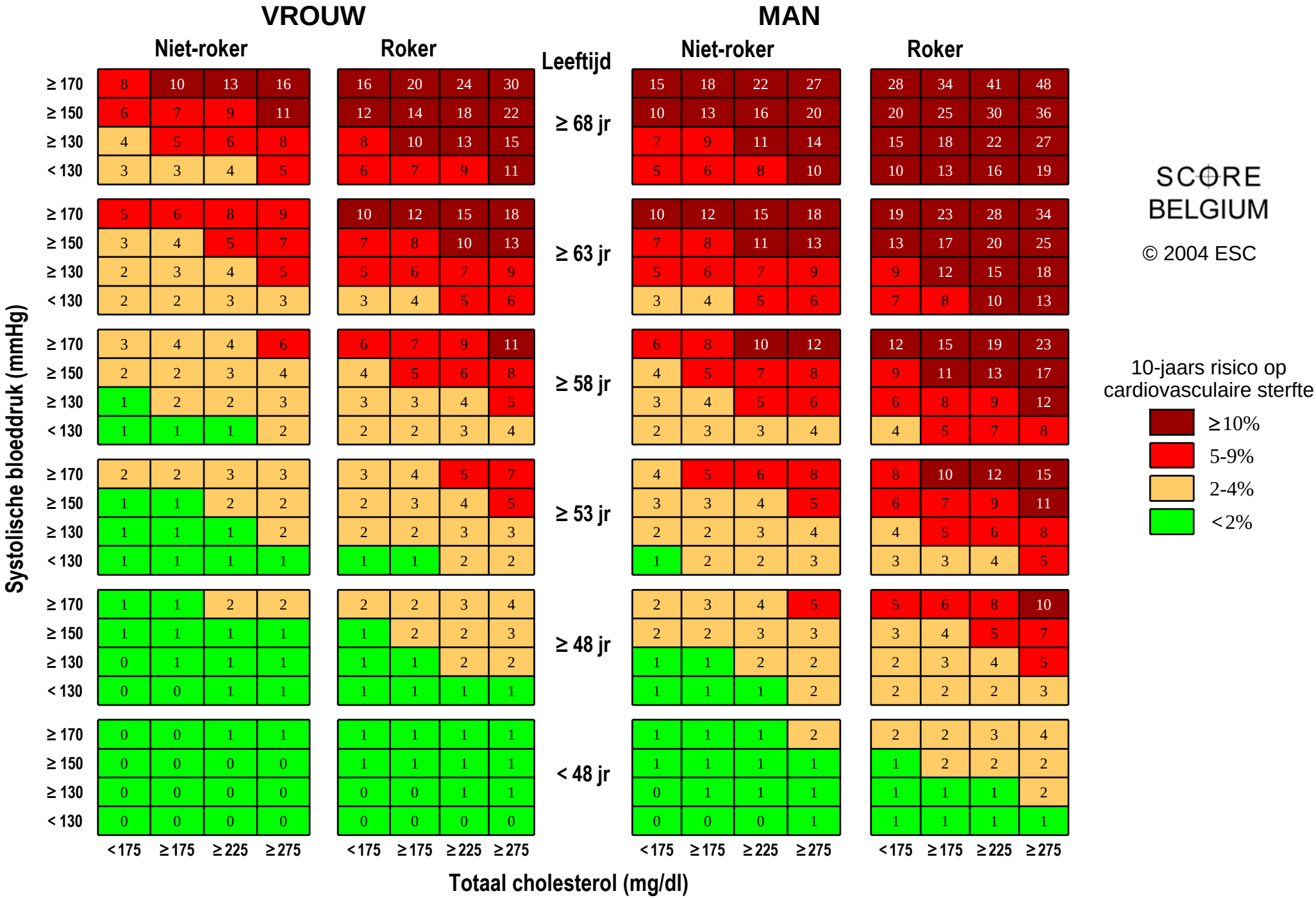
not in a dichotomous way.

Highest risk is not defined by a magic number!

Total CV risk NOW should be complemented by lifetime risk

SCORE

- ✓ the new European risk prediction system
- ✓ based on 12 European cohort studies of 210 000 subjects
- ✓ can and has been tailored to individual European countries
- ✓ can accomodate new cohorts and new risk factors


VROUW
MAN
Niet-roker
Roker
Niet-roker
Roker
Leeftijd
≥ 68 jr
≥ 63 jr
≥ 58 jr
≥ 53 jr
≥ 48 jr
< 48 jr
Systolische bloeddruk (mmHg)
≥ 170
≥ 150
≥ 130
< 130
8 10 13 16 | 16 20 24 30 | 15 18 22 27 | 28 34 41 48
6 7 9 11 | 12 14 18 22 | 10 13 16 20 | 20 25 30 36
4 5 6 8 | 8 10 13 15 | 7 9 11 14 | 15 18 22 27
3 3 4 5 | 6 7 9 11 | 5 6 8 10 | 10 13 16 19
5 6 8 9 | 10 12 15 18 | 10 12 15 18 | 19 23 28 34
3 4 5 7 | 7 8 10 13 | 7 8 11 13 | 13 17 20 25
2 3 4 5 | 5 6 7 9 | 5 6 7 9 | 9 12 15 18
2 2 3 3 | 3 4 5 6 | 3 4 5 6 | 7 8 10 13
3 4 4 6 | 6 7 9 11 | 6 8 10 12 | 12 15 19 23
2 2 3 4 | 4 5 6 8 | 4 5 7 8 | 9 11 13 17
1 2 2 3 | 3 3 4 5 | 3 4 5 6 | 6 8 9 12
1 1 1 2 | 2 2 3 4 | 2 3 3 4 | 4 5 7 8
2 2 3 3 | 3 4 5 7 | 4 5 6 8 | 8 10 12 15
1 1 2 2 | 2 3 4 5 | 3 3 4 5 | 6 7 9 11
1 1 1 2 | 2 2 3 3 | 2 2 3 4 | 4 5 6 8
1 1 1 1 | 1 1 2 2 | 1 2 2 3 | 3 3 4 5
1 1 2 2 | 2 2 3 4 | 2 3 4 5 | 5 6 8 10
1 1 1 1 | 1 2 2 3 | 2 2 3 3 | 3 4 5 7
0 1 1 1 | 1 1 2 2 | 1 1 2 2 | 2 3 4 5
0 0 1 1 | 1 1 1 1 | 1 1 1 2 | 2 2 2 3
0 0 1 1 | 1 1 1 1 | 1 1 1 2 | 2 2 3 4
0 0 0 0 | 1 1 1 1 | 1 1 1 1 | 1 2 2 2
0 0 0 0 | 0 0 1 1 | 0 1 1 1 | 1 1 1 2
0 0 0 0 | 0 0 0 0 | 0 0 0 1 | 1 1 1 1
< 175
≥ 175
≥ 225
≥ 275
Totaal cholesterol (mg/dl)
SCORE BELGIUM
© 2004 ESC
10-jaars risico op cardiovasculaire sterfte
≥ 10%
5-9%
2-4%
< 2%

Using the cardiovascular risk chart
Qualifiers

Note that total CVD risk may be higher than indicated in the chart:

- **in asymptomatic subjects with pre-clinical evidence of atherosclerosis (e.g. CT scan, ultrasonography)**
- **in subjects with a strong family history of premature CVD**
- **in subjects with with raised triglyceride levels, with impaired glucose tolerance, with raised levels of C-reactive protein, fibrinogen, homocysteine, apolipoprotein B or Lp(a).**
- **in obese and sedentary subjects**

Psychosocial factors in total CV risk estimation

By not considering the large gradient in CVD risk between social classes,the Framingham and the SCORE models may lead to an underestimation of total CV risk in the most deprived thereby leading to an undertreatment and to an increase in social inequalities in CVD

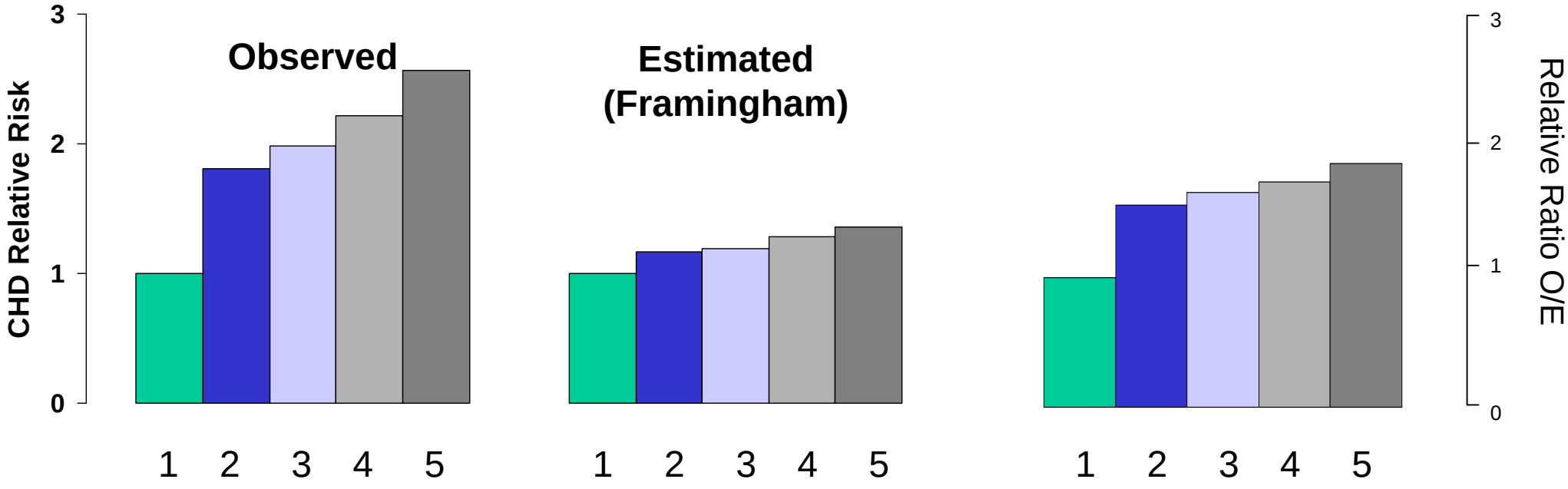
The challenge in the prevention of CVD:

the failure to act in those who have the potential to benefit

versus

medicalisation of people who have little to gain

By neglecting deprivation, cardiovascular risk scoring will exacerbate social gradients in disease



Deprivation index, quintiles
(1 = least deprived, 5 = most deprived)

Heart 2006;92:307

Barriers to Optimal Management: A Multifactorial Problem

Key contributing factors:

Physician[1]

- Lack of time
- Failure to meet treatment targets
- Inadequate patient counseling and follow-up

1. Hobbs FD et al. *Fam Pract.* 2002;19:596-604.
2. Pearson TA et al. *J Am Coll Cardiol.* 1996;27:1039-1047.

Barriers to Optimal Management: A Multifactorial Problem

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- Inadequate patient counseling and follow-up

Patient[2]

- Lack of knowledge and motivation
- Poor medication adherence
- Cultural and social factors

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Improving Patient Adherence

- Simplify the dosing regimen if possible by reducing daily doses and concomitant medications
- Provide clear written and oral instructions
- Dialogue with patient regarding adherence
- Tailor regimen to patient's lifestyle and needs
- Involve patient as partner in treatment
- Use behavioral strategies (reminder systems, cues, self-monitoring, feedback, reinforcement)

Russell M. In: *Behavioral Counseling in Medicine: Strategies for Modifying At-Risk Behavior.* New York, NY: Oxford University Press; 1986.

Barriers to Optimal Management: A Multifactorial Problem

Key contributing factors:

Physician[1]

- Lack of time
- Failure to meet treatment targets
- Inadequate patient counseling and follow-up

Payor[2]

"Illness-" rather than prevention-driven

- Cost pressures/limited resources

Patient[2]

- Lack of knowledge and motivation
- Poor medication adherence
- Cultural and social factors

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