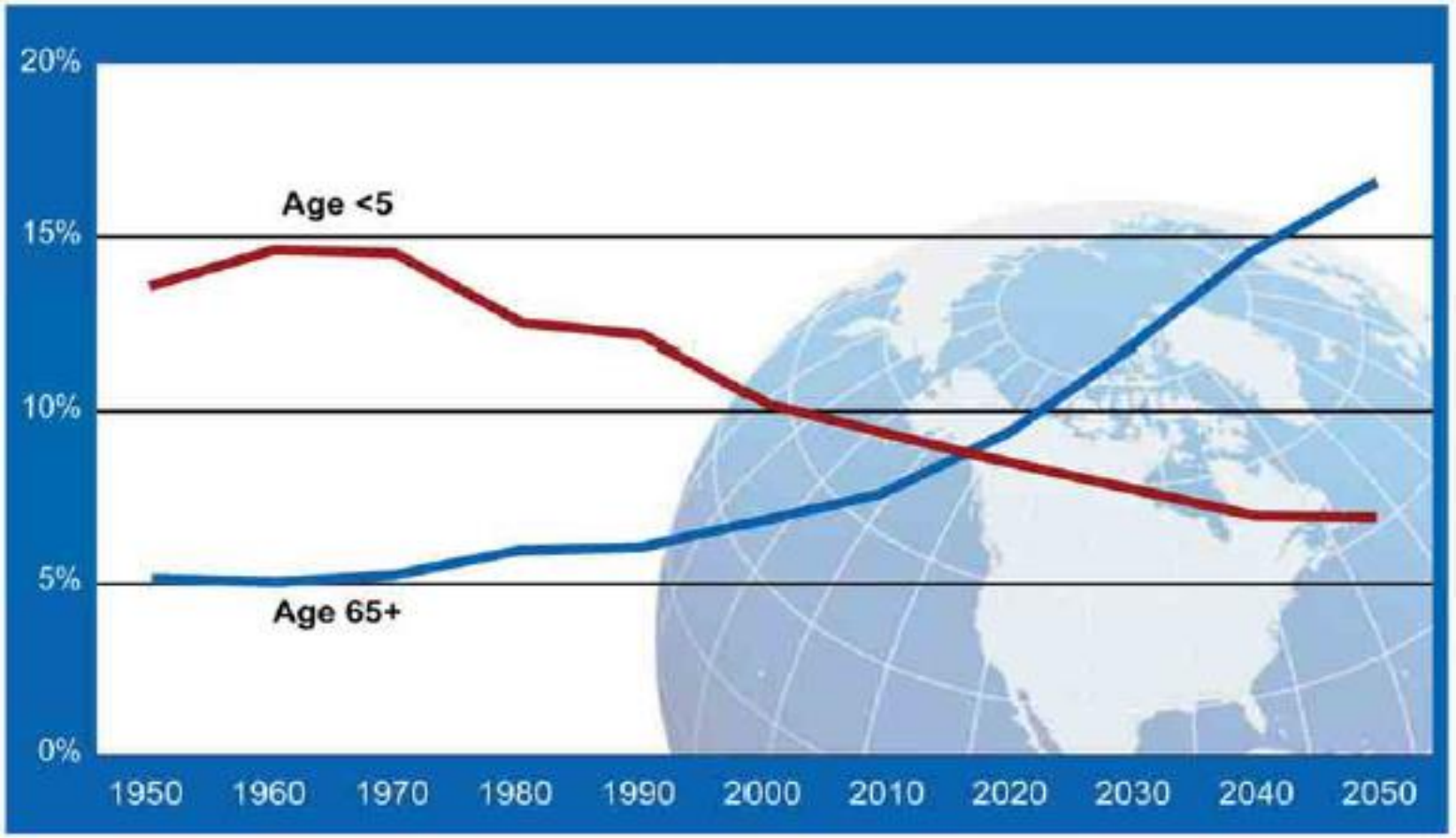

# Should octagenarians quit smoking?

***Vasiliki Giannakopoulou MD, Phd, FESC, FACC, FEAS***
***Director of Coronary ICU & Lipid Clinic in Tzanio Hospital-Piraeus***
***President of the Epidemiology & Preventive Working Group of HSC***
***Secretary—College Treatment of Atherosclerosis***

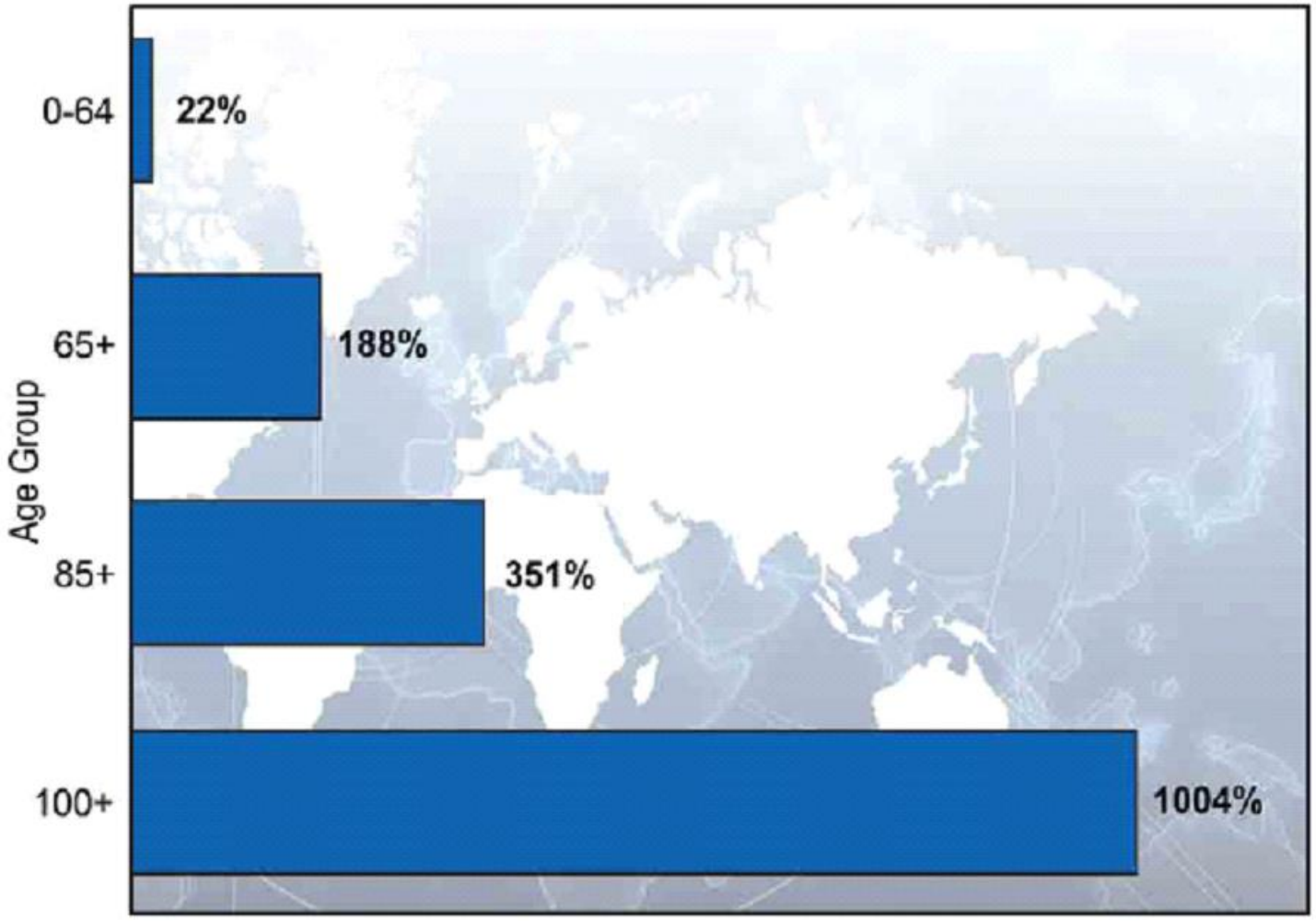
No conflict of interest

# Young Children and Older People as a Percentage of Global Population: 1950-2050



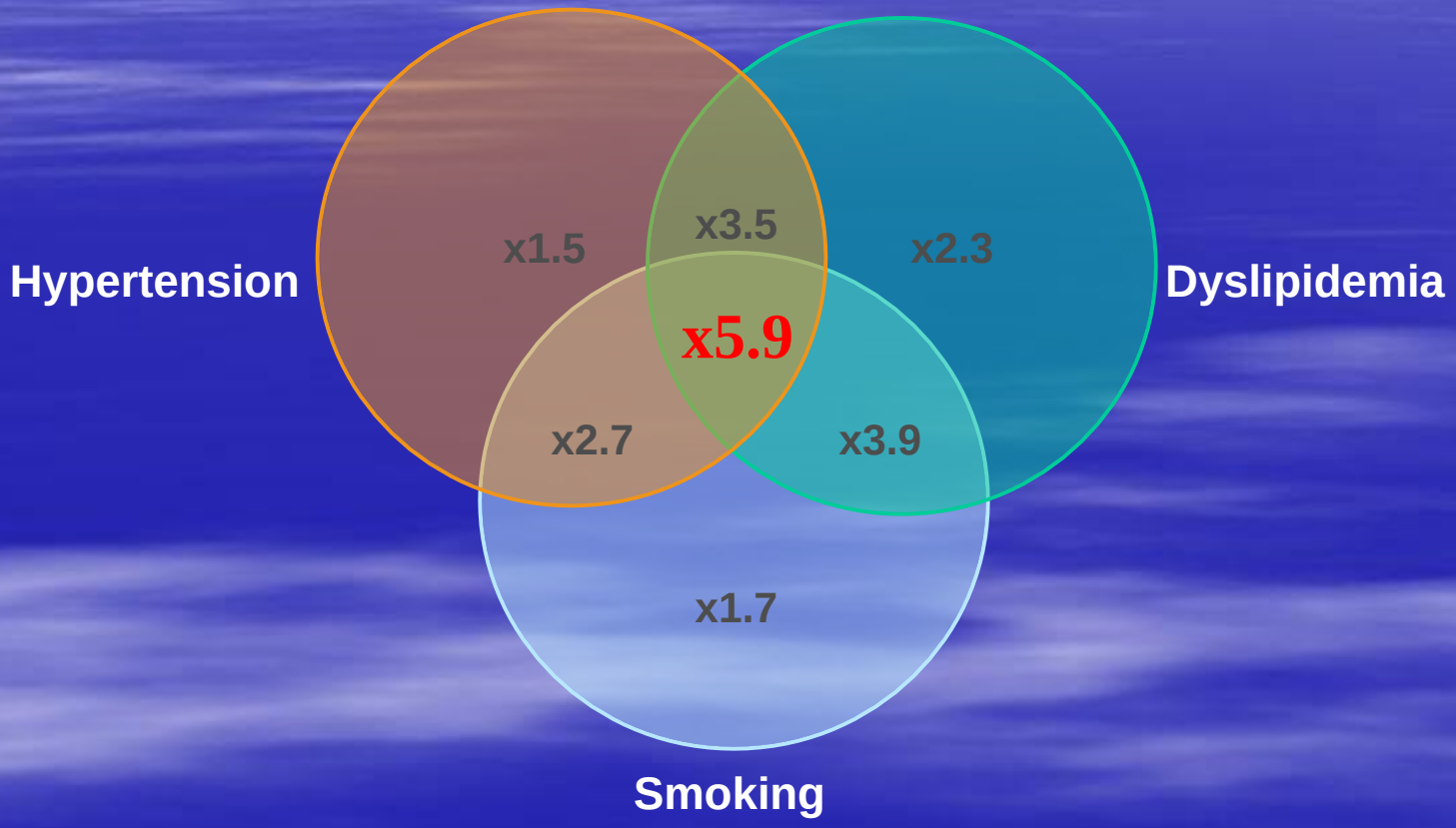

Source: United Nations. *World Population Prospects: The 2010 Revision.*
Available at: http://esa.un.org/unpd/wpp.

## Percentage Change in the World's Population by Age: 2010-2050



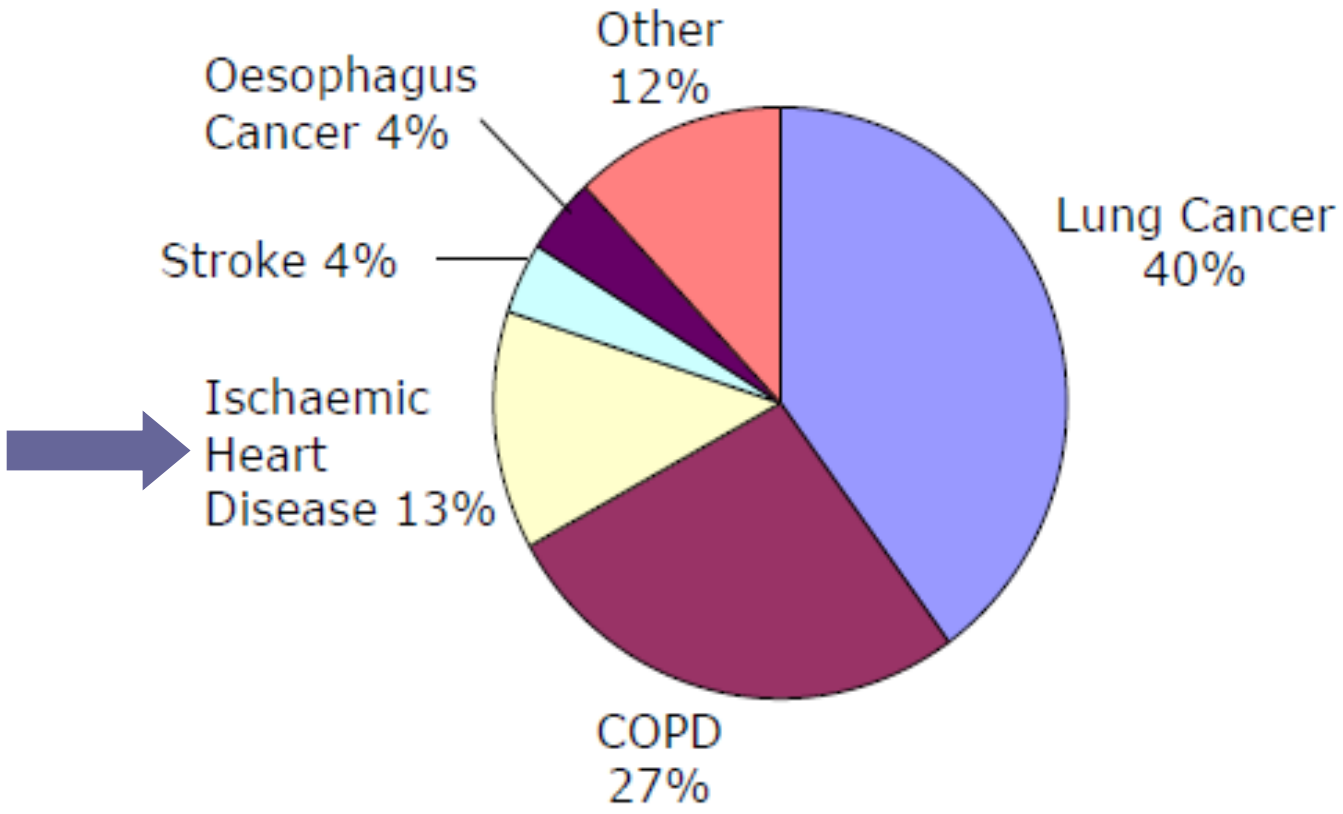

Source: United Nations, *World Population Prospects: The 2010 Revision.*
Available at: http://esa.un.org/unpd/wpp.

# Multiplicative Effect on Risk of Death From Top Risk Factors of Cardiovascular Disease




Hypertension defined as systolic blood pressure = 150 mm Hg; Dyslipidemia defined as total cholesterol=260 mg/ dL; Smoking defined as current smoking.
Kannel WB, 1977.

# Cardiovascular diseases linked with smoking

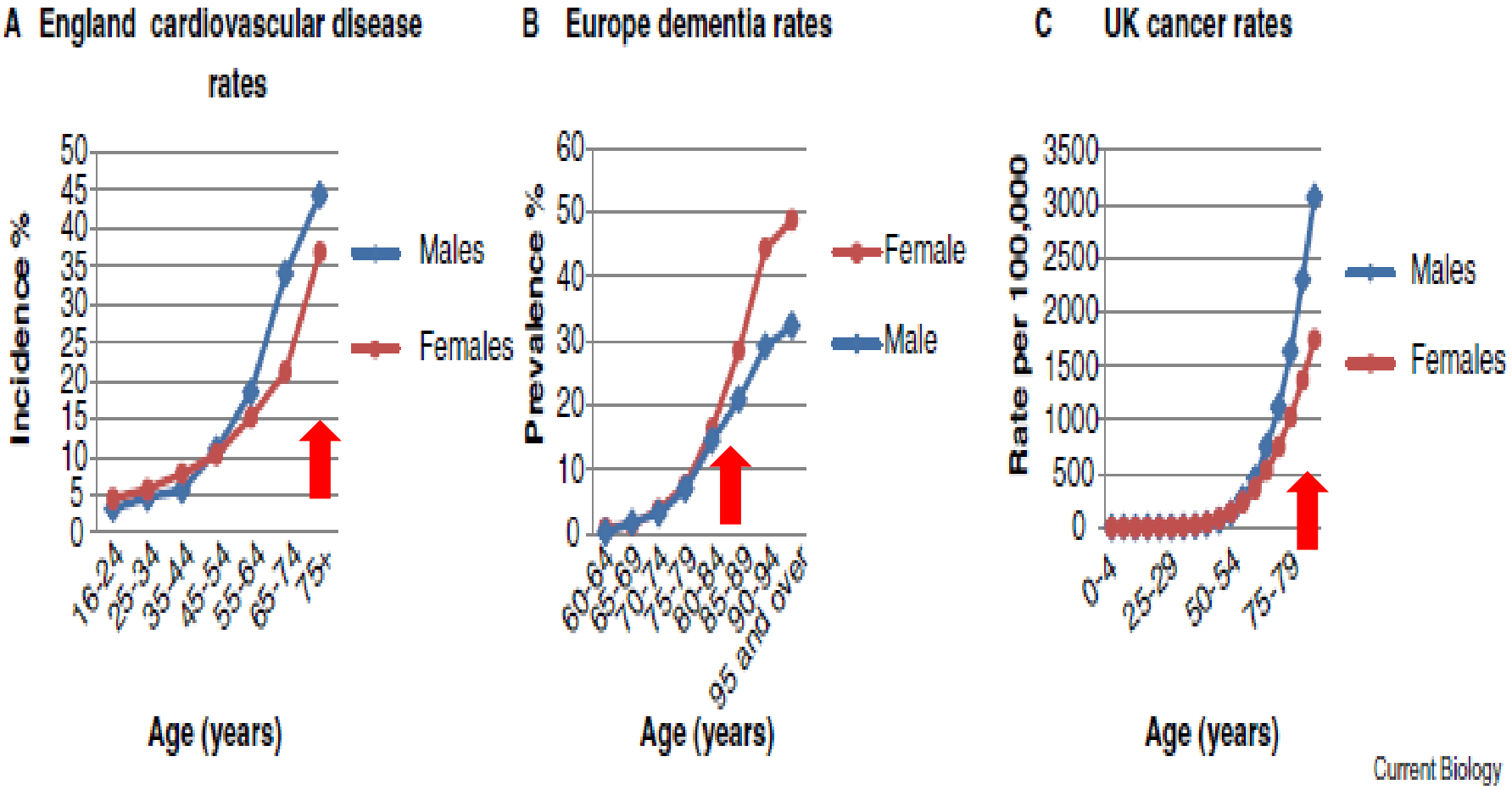



Over 1/5 of deaths due to smoking-related illness are caused by heart disease

# Smoking effects on cardiovascular system

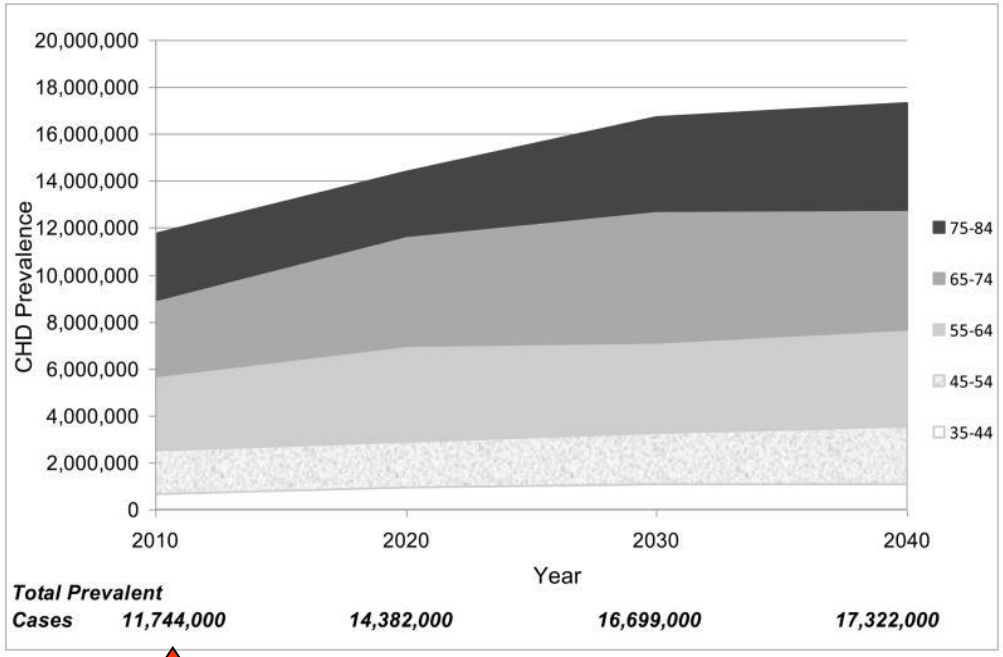
- Toxic products create a proatherogenic status
- Provoke endothelial damage and dysfunction
- Affects the platelets and ↑ thrombosis
- ↓ HDL
- ↑ arterial stiffness
- ↑ oxidative stress
- ↑ inflammation

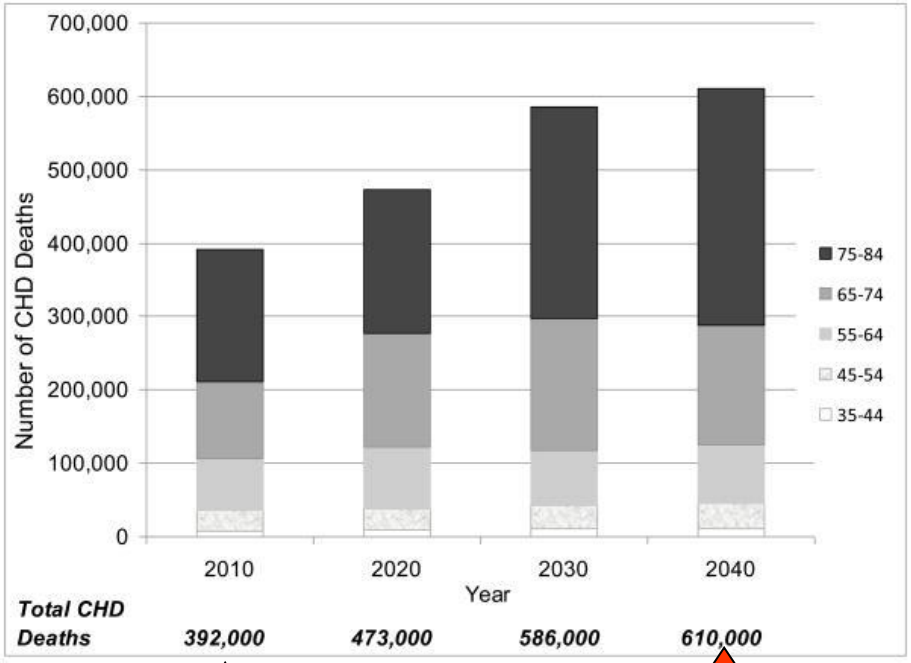
# Disease /total death rates for the most common diseases of old age




*Current Biology 2012*

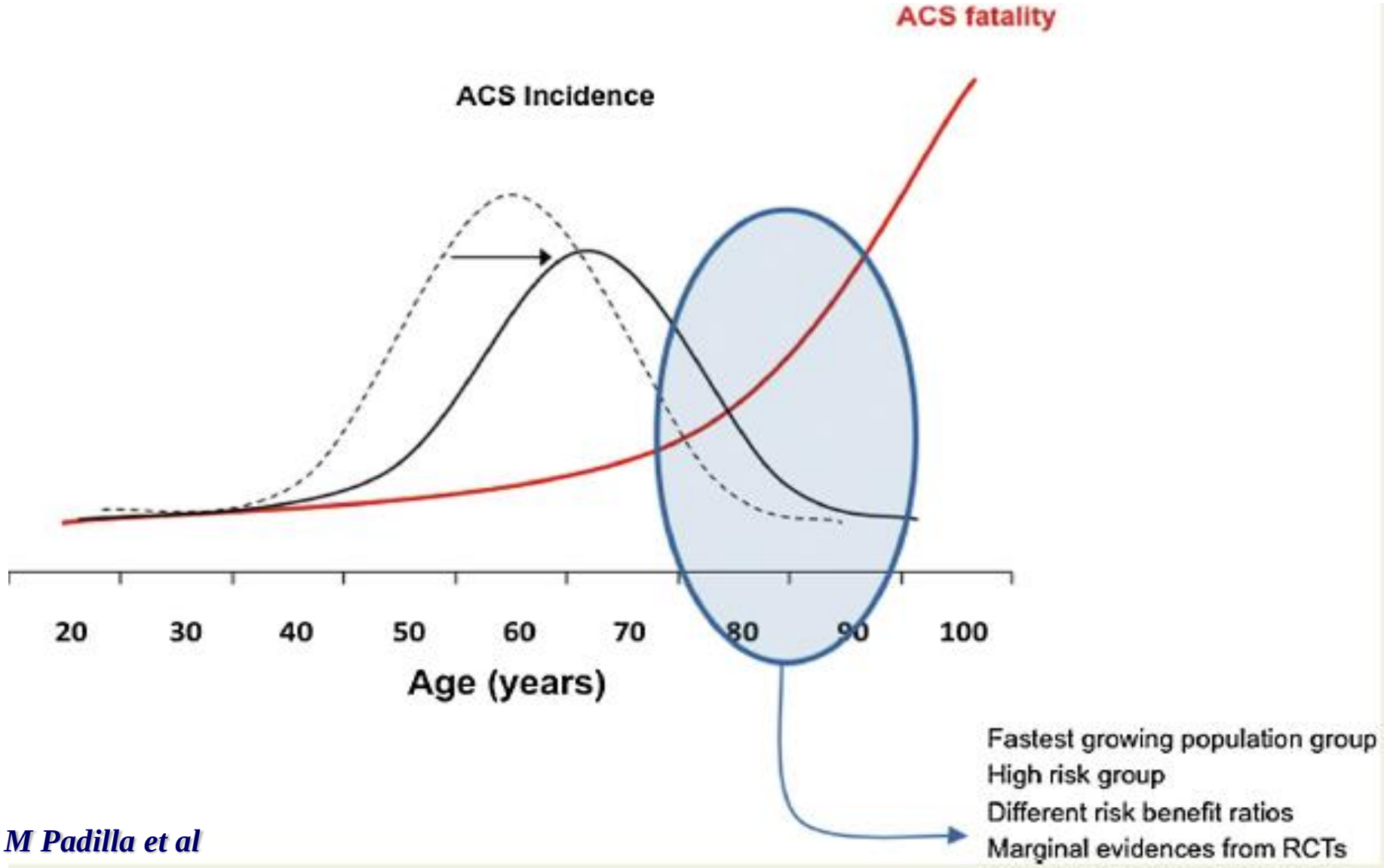
# The impact of the aging population on CHD in the USA



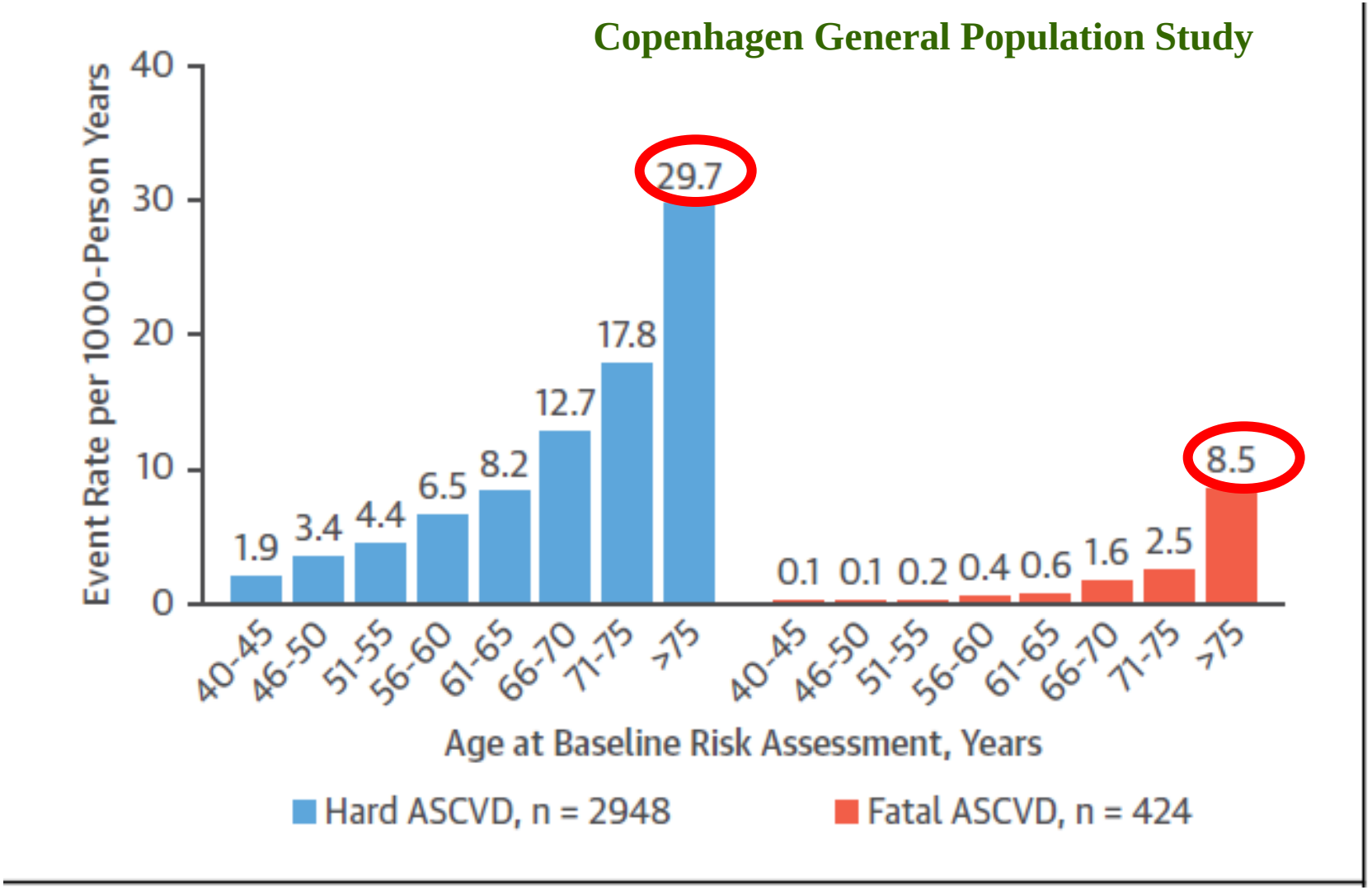

Odden MC et al Am J Med. 2011

# Changes in the epidemiology of ACSs & theoretical implications of ageing in their management



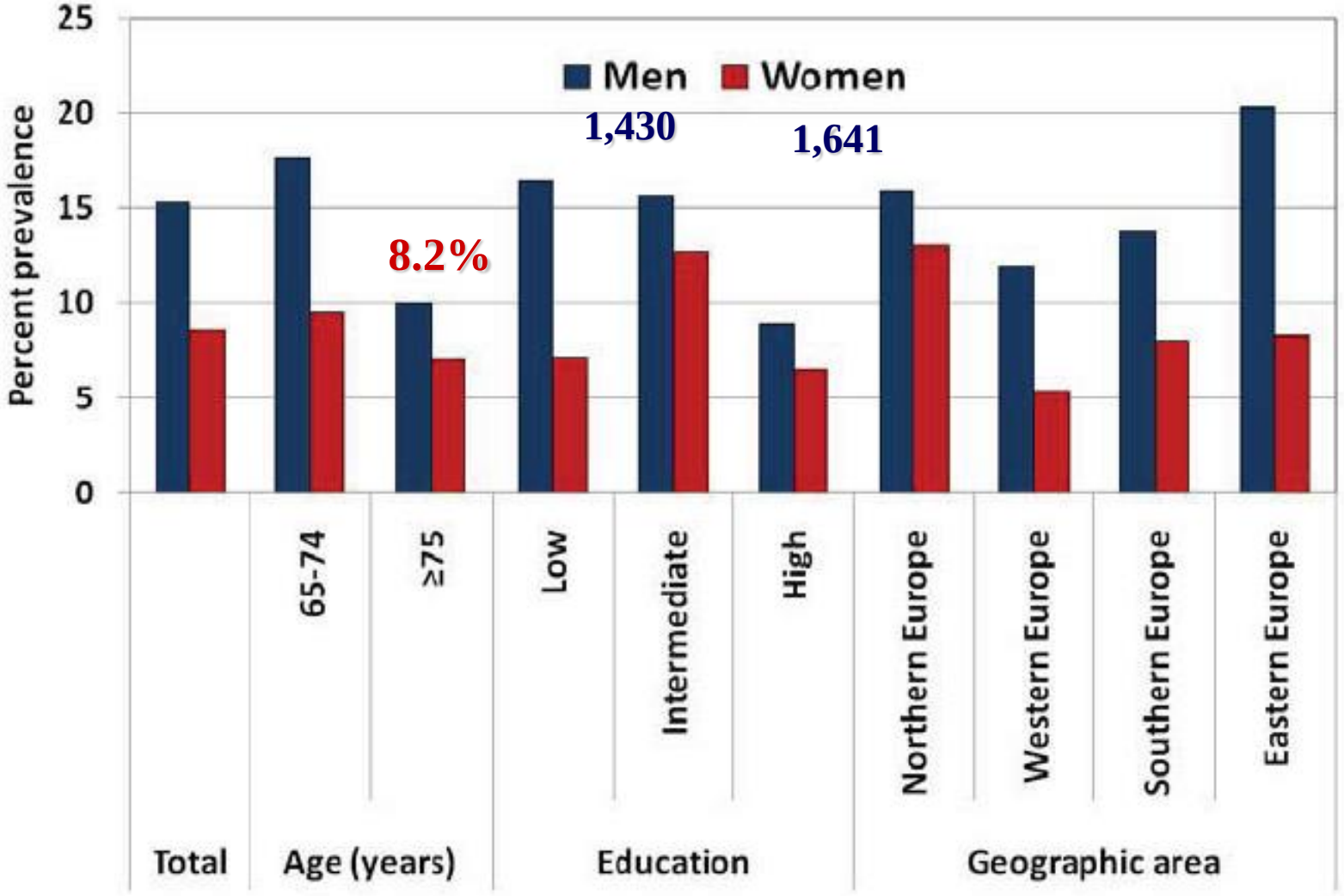

*I M Padilla et al*
*Heart, Lung & Circulation 2017*

# Relationship Between Hard & Fatal ASCVD Events




*Martin Bødtker Mortensen JACC January 2018*

# *Pricing Policies and Control of Tobacco in Europe PPACTE project*




**17 European countries**
**3,071 participants**

***A.Lugo et al***

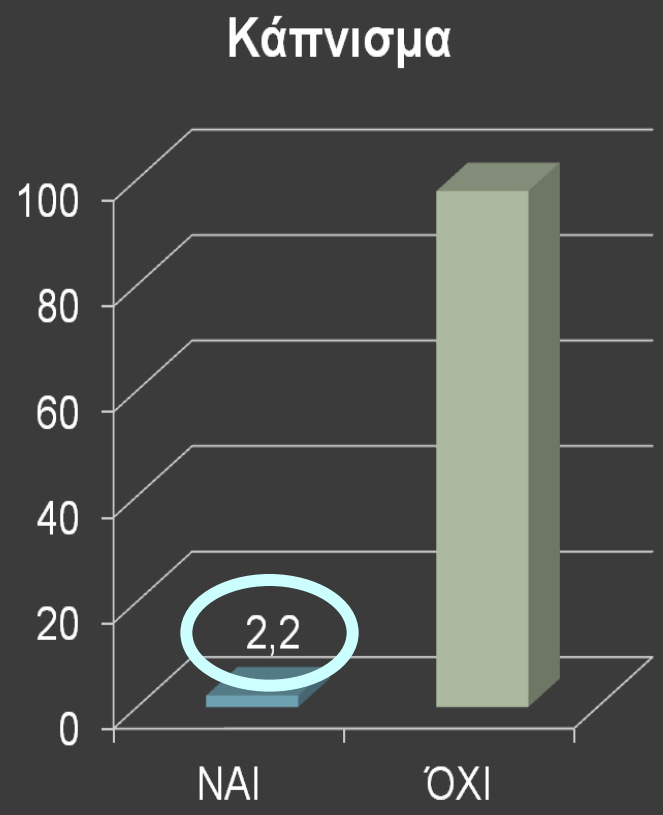
- ***Int. J. Environ. Res. Public Health 2013***

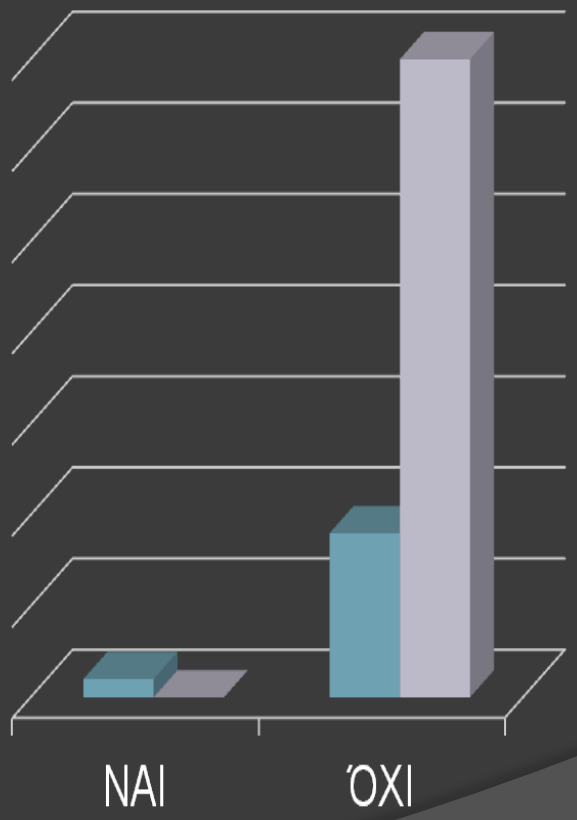
| | N | Current smokers (%; 95% CI) | | | Ex-smokers (%; 95% CI) | | |
|---|---|---|---|---|---|---|---|
| | | Total | Men | Women | Total | Men | Women |
| **Total** | 3,071 | 11.5 (10.4–12.6) | 15.3 (13.4–17.2) | 8.6 (7.2–10.0) | 23.5 (22.0–25.0) | 33.9 (31.4–36.4) | 15.2 (13.5–16.9) |
| Age | | | | | | | |
| 65–74 | 2,029 | 13.4 (11.9–14.9) | 17.7 (15.3–20.1) | 9.5 (7.7–11.3) | 23.0 (21.2–24.8) | 31.1 (28.2–34.0) | 15.8 (13.6–18.0) |
| ≥75 | 1,042 | 8.2 (6.5–9.9) | 10.0 (7.3–12.7) | 7.1 (5.0–9.2) | 24.4 (21.8–27.0) | 39.9 (35.5–44.3) | 7.1 (5.0–9.2) |
| Education^ | | | | | | | |
| Low | 1,704 | 11.6 (10.1–13.1) | 16.5 (13.9–19.1) | 7.2 (5.5–8.9) | 21.1 (19.2–23.0) | 31.7 (28.5–34.9) | 11.6 (9.5–13.7) |
| Intermediate | 954 | 14.0 (11.8–16.2) | 15.6 (12.1–19.1) | 12.7 (9.9–15.5) | 30.0 (27.1–32.9) | 39.3 (34.6–44.0) | 22.1 (18.6–25.6) |
| High | 412 | 7.7 (5.1–10.3) | 8.9 (5.0–12.8) | 6.6 (3.2–10.0) | 30.0 (25.6–34.4) | 34.5 (28.0–41.0) | 25.4 (19.4–31.4) |
| Geographic area | | | | | | | |
| Northern Europe | 844 | 14.4 (12.0–16.8) | 15.9 (12.3–19.5) | 13.1 (10.0–16.2) | 41.6 (38.3–44.9) | 52.0 (47.1–56.9) | 32.9 (28.6–37.2) |
| Western Europe | 380 | 8.2 (5.4–11.0) | 12.0 (7.1–16.9) | 5.4 (2.4–8.4) | 27.2 (22.7–31.7) | 47.2 (39.6–54.8) | 12.8 (8.3–17.3) |
| Southern Europe | 577 | 10.6 (8.1–13.1) | 13.8 (9.7–17.9) | 8.0 (5.0–11.0) | 14.8 (11.9–17.7) | 21.9 (16.9–26.9) | 9.1 (5.9–12.3) |
| Eastern and central Europe | 1,270 | 13.8 (11.9–15.7) | 20.3 (17.1–23.5) | 8.3 (6.2–10.4) | 16.6 (14.6–18.6) | 23.8 (20.4–27.2) | 10.6 (8.3–12.9) |
| Tobacco Control Scale (TCS) # | | | | | | | |
| <45 | 1,103 | 14.9 (12.8–17.0) | 20.6 (17.0–24.2) | 10.3 (7.9–12.7) | 19.1 (16.8–21.4) | 24.3 (20.5–28.1) | 14.9 (12.1–17.7) |
| ≥45 | 1,712 | 10.8 (9.3–12.3) | 14.0 (11.6–16.4) | 8.2 (6.4–10.0) | 24.7 (22.7–26.7) | 36.2 (32.9–39.5) | 15.6 (13.2–18.0) |

*A. Lugo et al. Int. J. Environ. Res. Public Health 2013*

# Factors of cardiovascular risk

**Total 700 people ~ 90 yrs old**



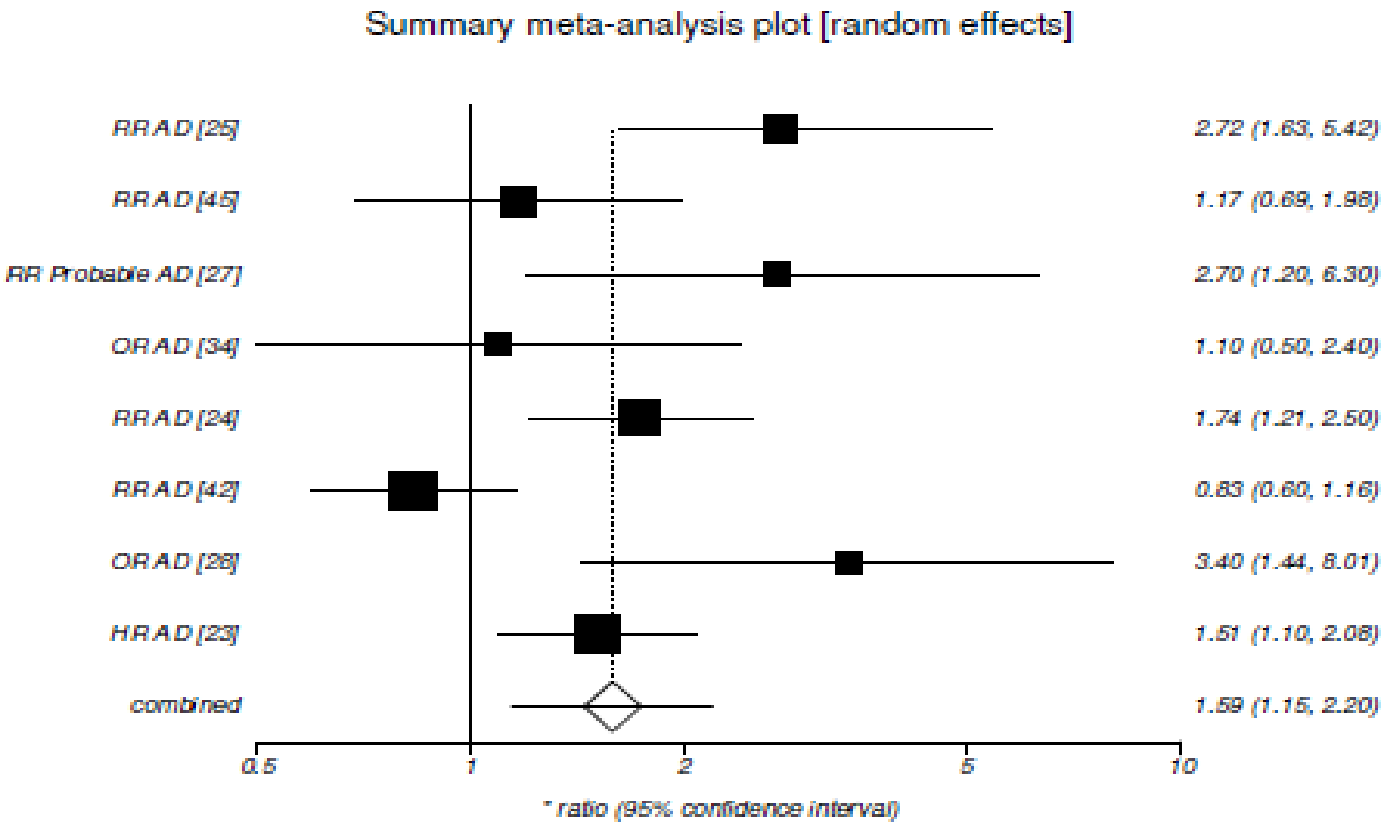




Άρρενες **22,2%**

Θήλεις **77,8%**

***Working Group of Epidemiology 2010***

# Smoking, dementia, cognitive decline in the elderly (Review of 28 papers described 23 longitudinal studies)



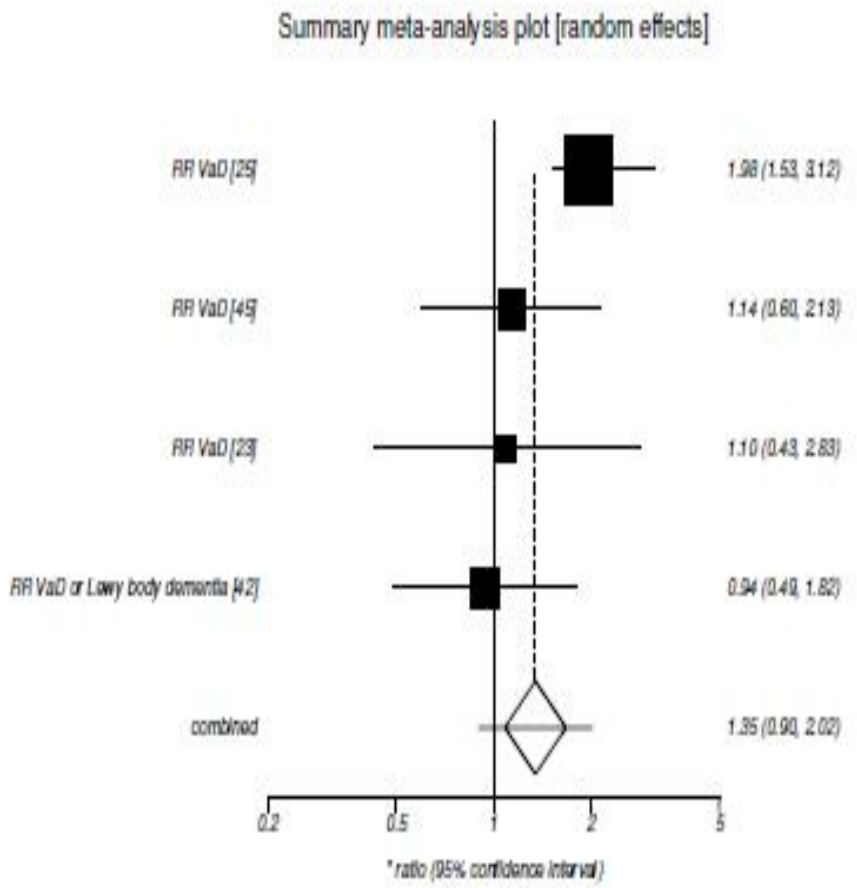

## Current smoking & Alzheimer's disease

Smoking related to decreased risk

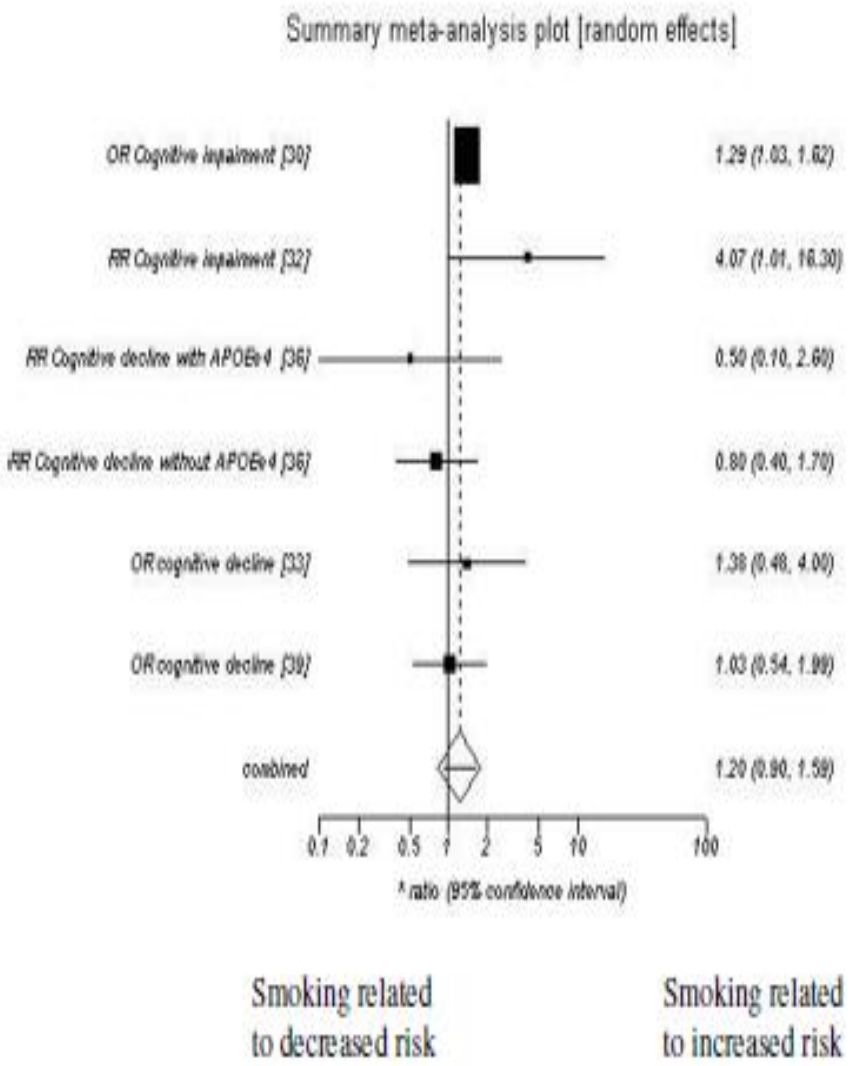
Smoking related to increased risk

*R. Peters et al BMC Geriatrics 2008*

## Current smoking & vascular dementia




## Current smoking & cognitive decline




*R. Peters et al BMC Geriatrics 2008*

# Death Rates of Older Adults

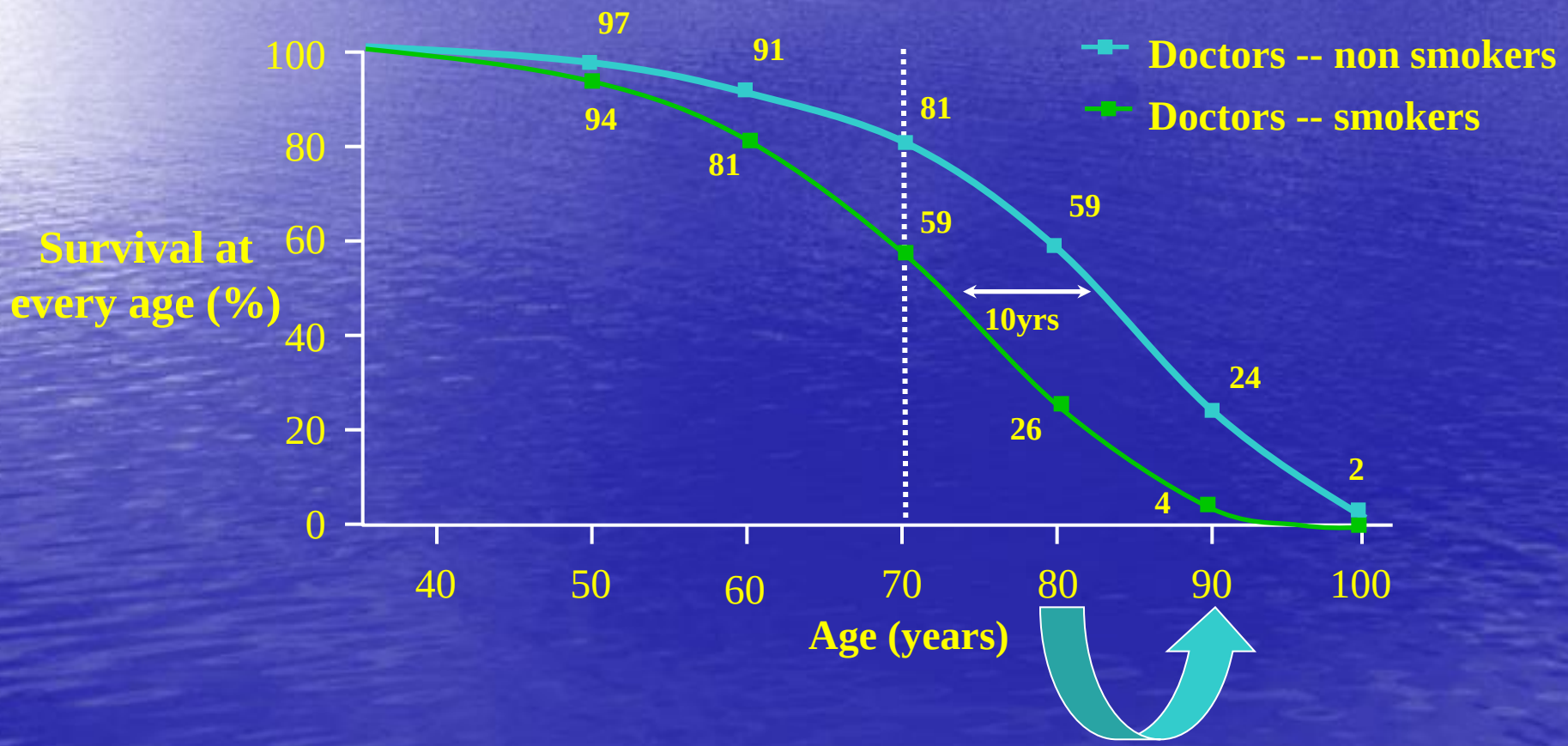
## Smoking is the leading cause of fire death among older adults

- Older adults are 3x more likely to die in fires than younger adults
- They are >2x more likely to die in fires than children ages 1-4 yrs
- The death rate for older adults increases with age
- By age 85, older adults have death rates 4x the overall U.S. rate

- Elderly people who have been smoking for a long time are in higher risk of developing Ca &CVD
- Need more help to quit, because smoking for them is not limited to mere nicotine addiction but contributes to defining their personal and social identity
- Quitting smoking can mean huge life changes
- Elderly people pay attention to their doctor's advice when it comes to quitting smoking
- Health professionals therefore have an important role to play, especially by reminding their elderly patients of the risks linked to smoking and by explaining that quitting smoking is beneficial, even late in life

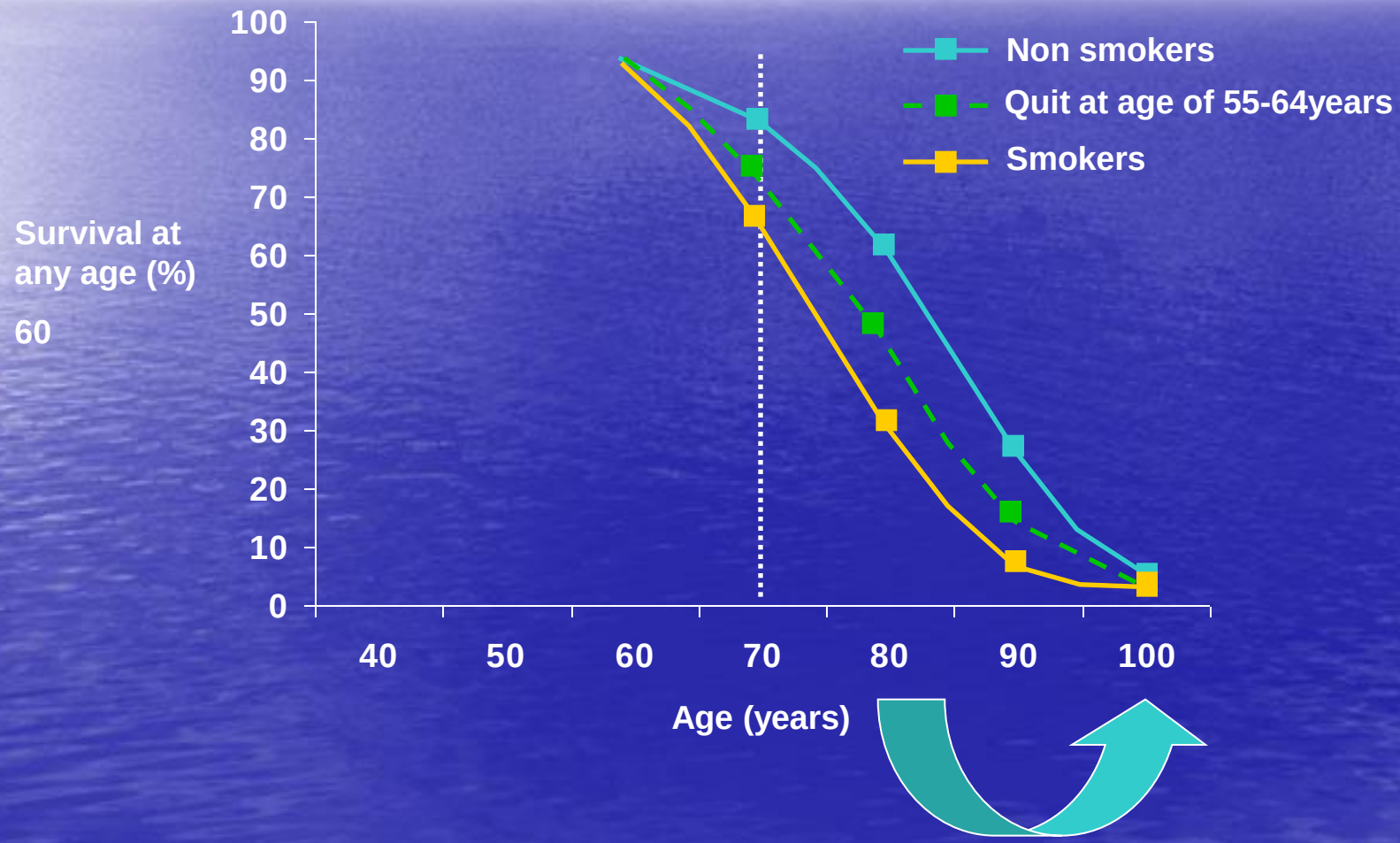
# Smoking decreases the survival of doctors-smokers of about 10 years

Physicians' Health Study 22,071♂ aged 40 to 84 yrs



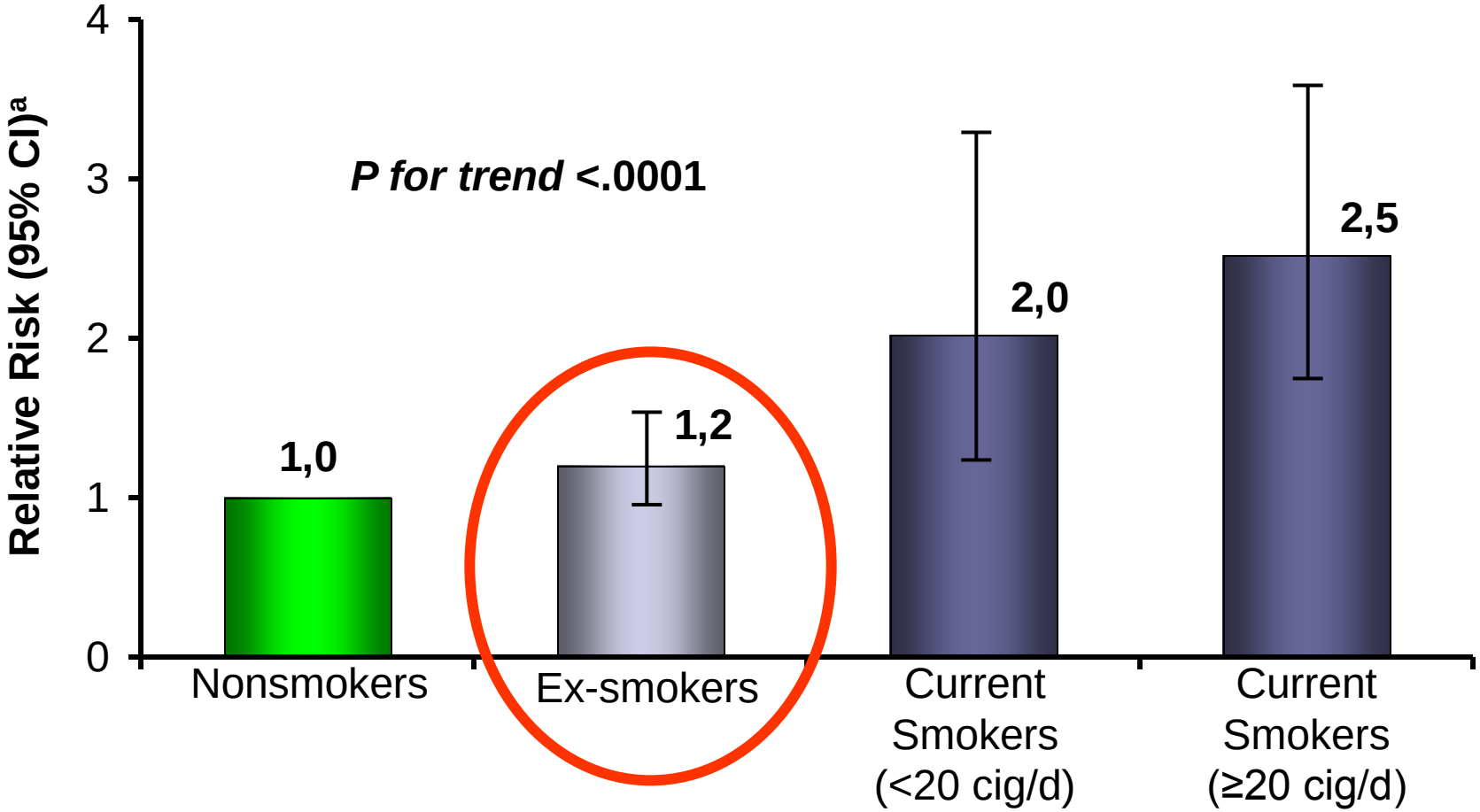

*Doll R, et al. BMJ. 2004;328:1519–1527.*

# Quitting of smoking at any age will increase the expected survival of doctors-smokres




*Doll R, et al. BMJ. 2004;328:1519–1527.*

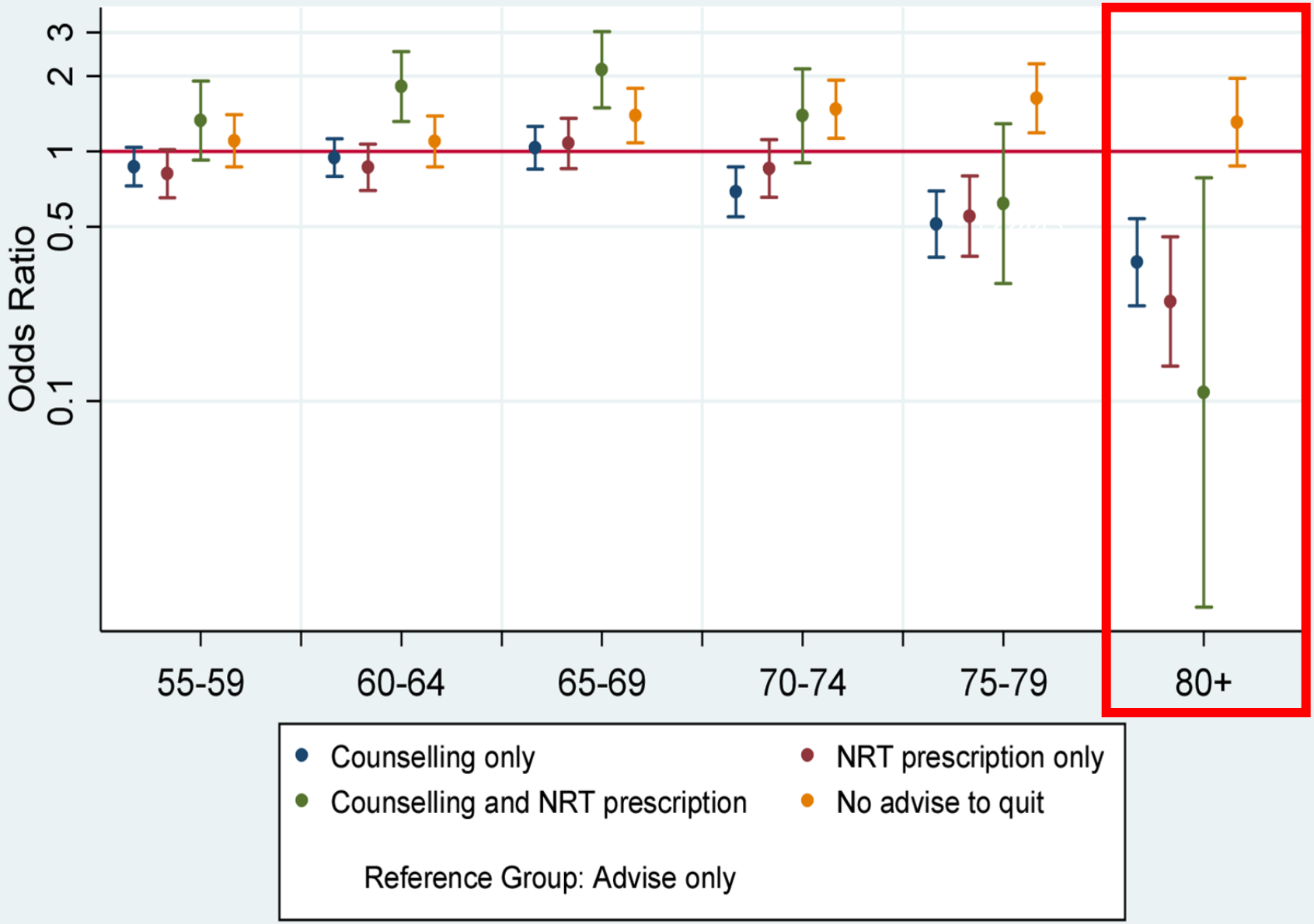
# Cardiovascular Benefits of Cessation: Reduced Risk of Stroke




[a]The probability of an event (developing a disease) occurring in exposed people compared with the probability of the event in nonexposed people. Adjusted for age and treatment assignment.

Robbins et al. *Ann Intern Med.* 1994;120(6):458-462.

# *An analysis of the cross-sectional English Smoking Toolkit Study*




**2006--2015 across England (n=181 157)**

***Jordan H. et al BMJ Open 2017***

## Our recommendations for cardiovascular disease prevention in older adults, considering frailty

| | |
|---|---|
| **Blood pressure** | For frail and not-frail patients without limited life expectancy, a goal blood pressure of < 140/90 mm Hg is reasonable with careful attention to risks, including orthostasis, falls, and polypharmacy<br>Treatment may need to be tailored to standing blood pressure |
| **Lipids** | For patients over age 75 without cardiovascular disease or frailty and with a life expectancy of at least 2 years, consider a statin for primary prevention, starting at a low dose |
| **Diabetes** | Aim for the lowest hemoglobin $A_{1c}$ that does not cause hypoglycemia; relax hemoglobin $A_{1c}$ goals with increasing frailty<br>Use hypoglycemic agents with caution |
| **Aspirin** | For patients over age 75 without frailty or cardiovascular disease and no major bleeding risk, but at high risk, consider low-dose aspirin for primary prevention of nonfatal myocardial infarction<br>Carefully consider bleeding risk to ensure that benefit outweighs risk |
| **Exercise and weight** | For all older adults, and particularly those with frailty, prescribe:<br>Balance training, such as tai chi, to decrease the risk of falls<br>Stretching at least twice a week<br>Moderate-intensity aerobics such as walking or swimming for 150 minutes per week<br>Resistance training at least twice a week for 20-minute intervals<br>General encouragement of daily activity |
| **Smoking cessation** | Smoking cessation remains beneficial at all ages and stages of life<br>All counseling interventions and nicotine replacement are effective |
| **Nutrition** | A balanced diet, rich in whole grains, fruits, vegetables, nuts, fish, and lean meats is beneficial at all ages and stages of life |
| **Unique challenges** | Inappropriate polypharmacy and complexity of medication regimens increases risk of drug events and falls<br>Multimorbidity requires the balance of multiple medical conditions to create a comprehensive plan<br>Explore goals of care and advance directives in creating a patient-centered prevention plan; engage in shared decision-making |

*Cleveland Clinic J. of Medicine 2018*

- ***Benjamin Franklin:***
  - ***"All would live long, but none would be old."***
- ***Abraham Lincoln:***
  - ***"And in the end, it's not the years in your life that count. It's the life in your years."***


Pireorama
Thank you