

Social circumstances and health

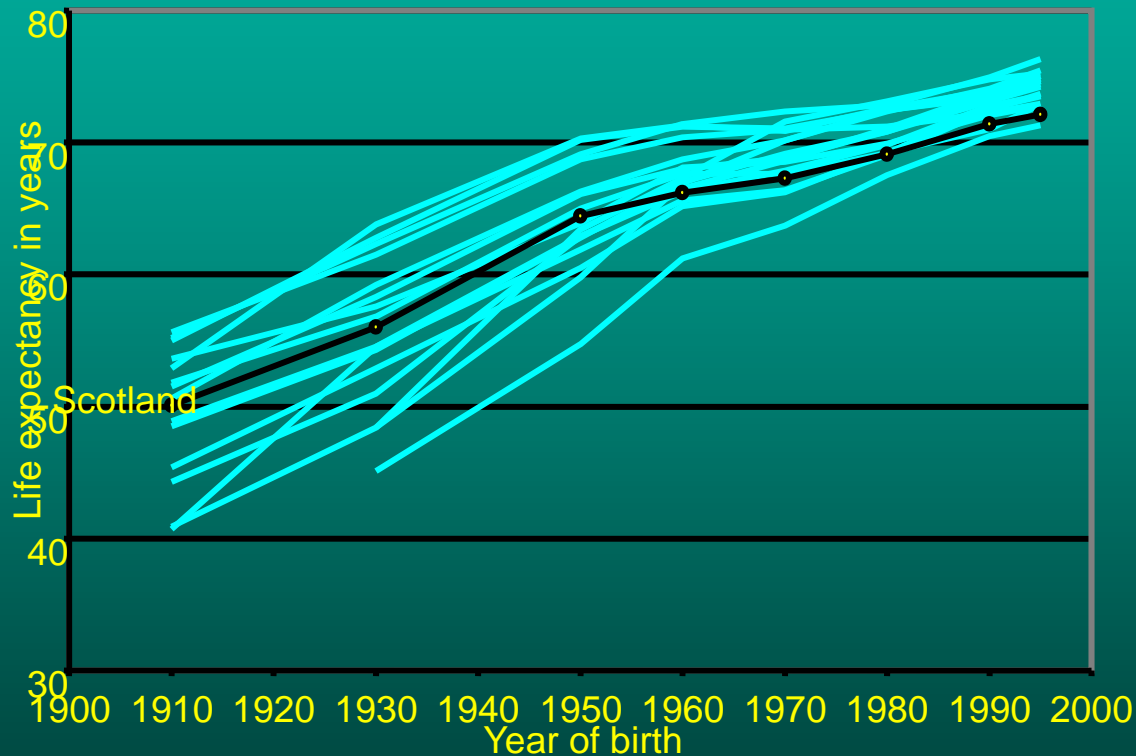


Basic assumptions

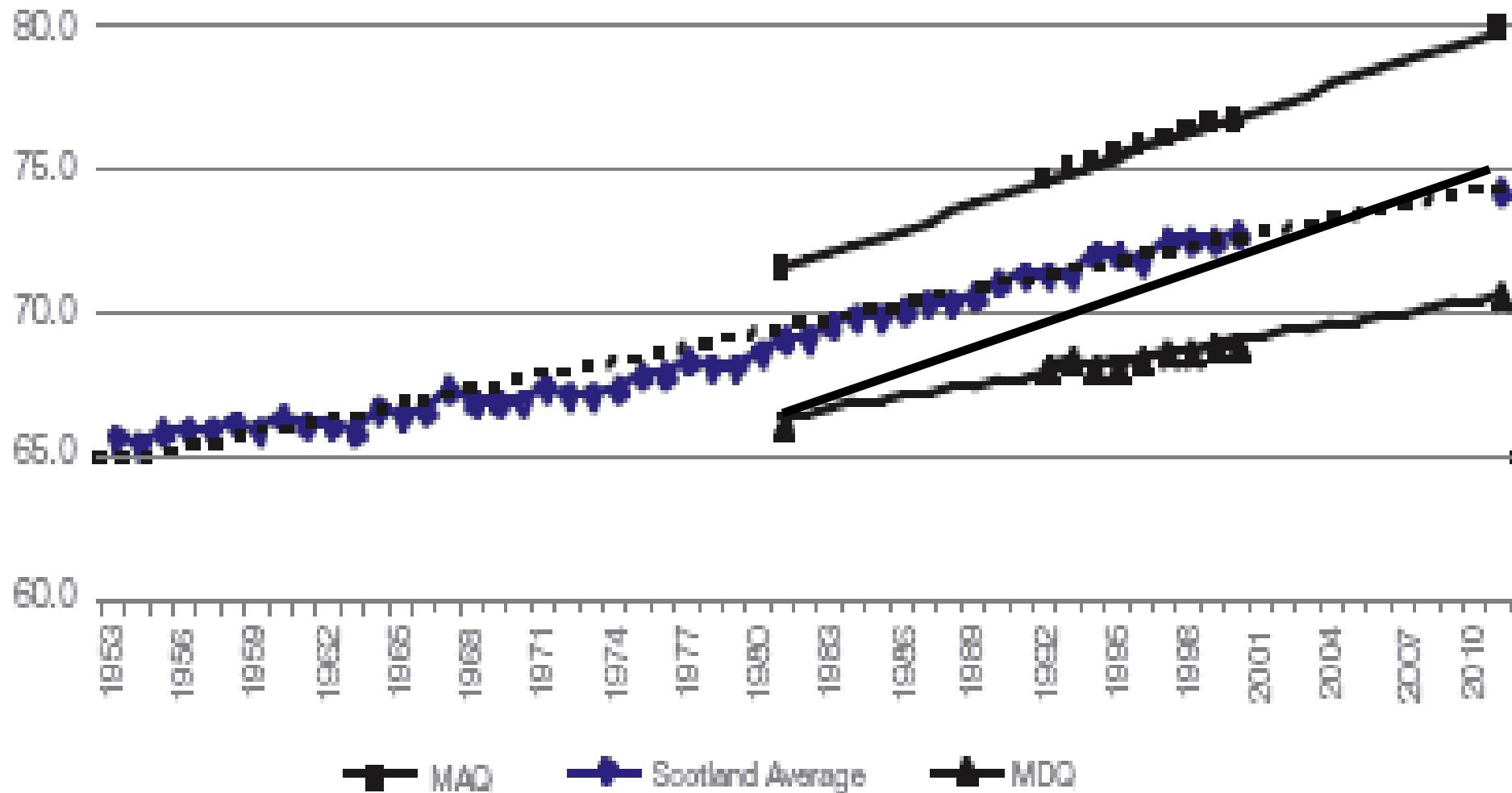
- ◆ **Action on health inequalities has been vigorous and, largely ineffectual**
- ◆ **Policies don't change lives, people do.**
- ◆ **Complex problems rarely have simple solutions**

20th century trends in life expectancy in Scotland and 16 other Western European countries

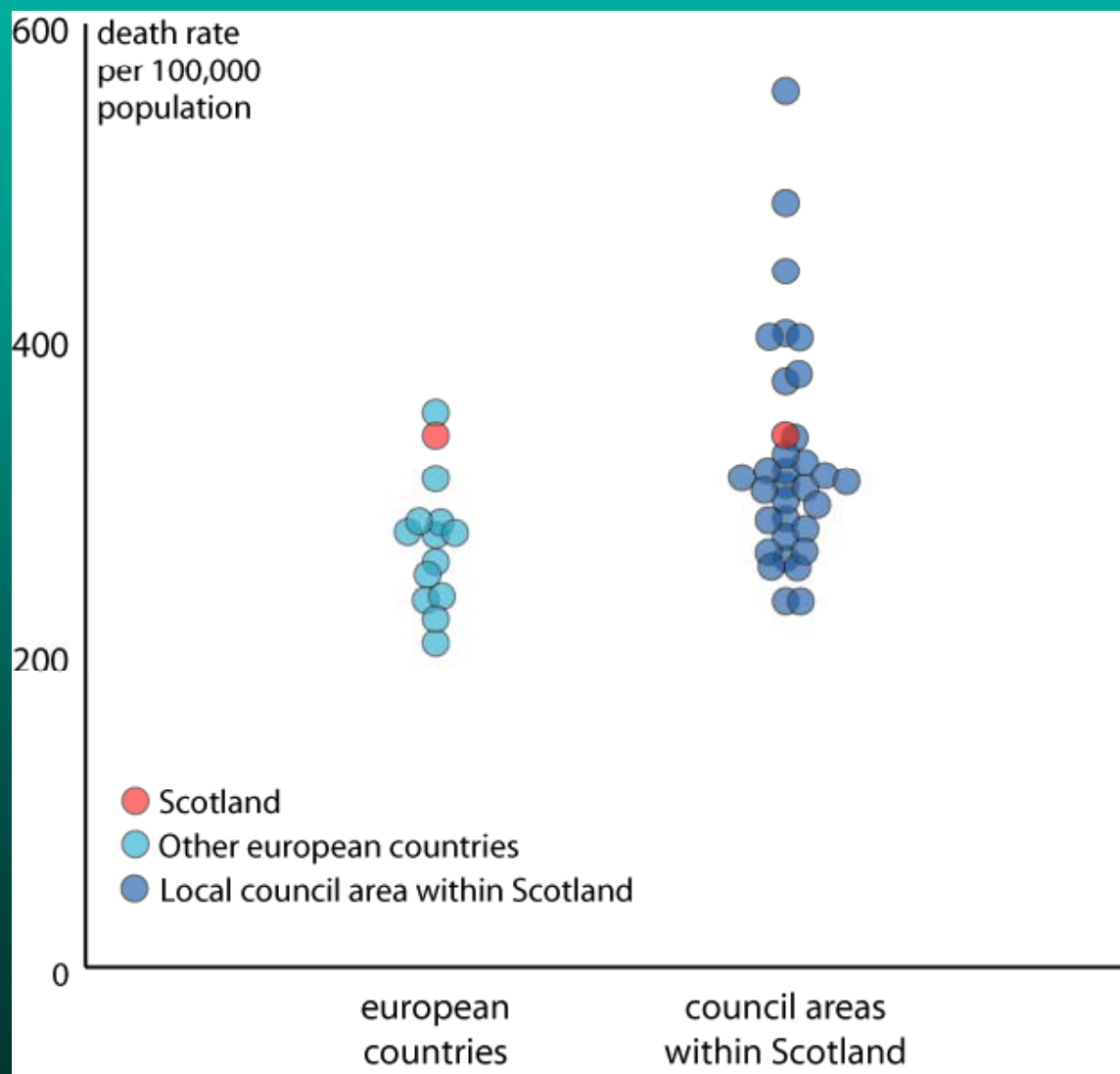
Males



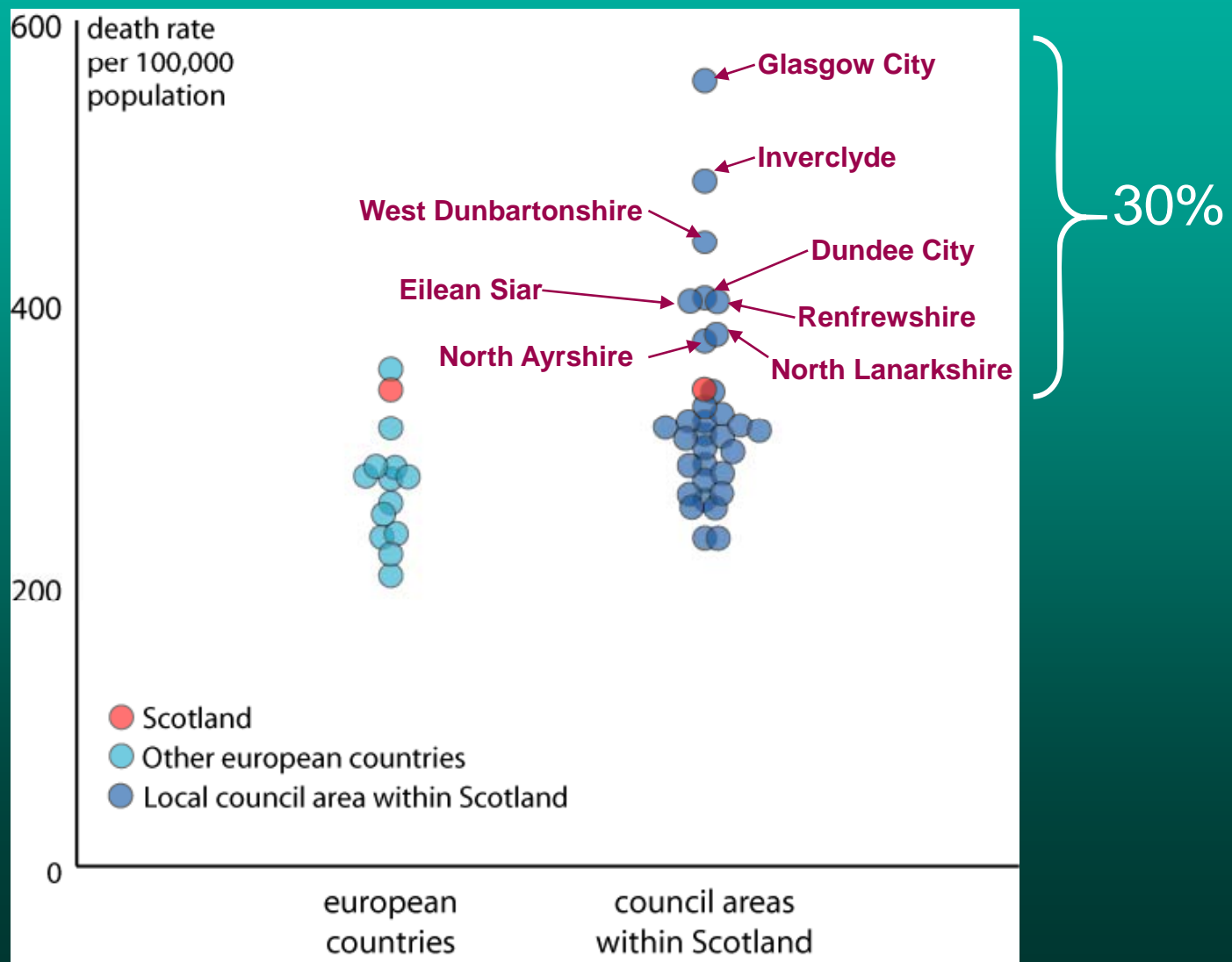
Trends in life expectancy - males



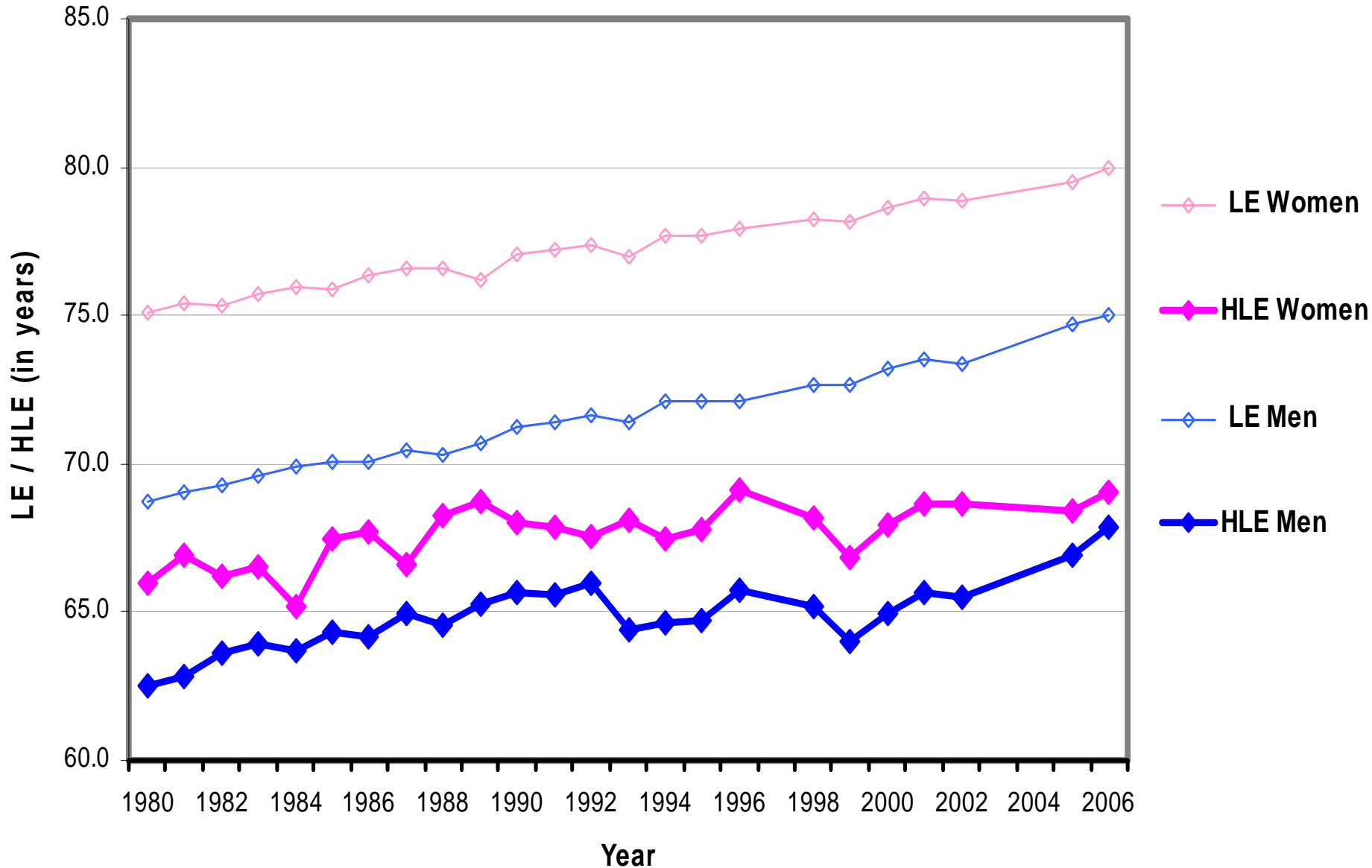
All cause death rates, M 0-64, 2001



All cause death rates, M 0-64, 2001

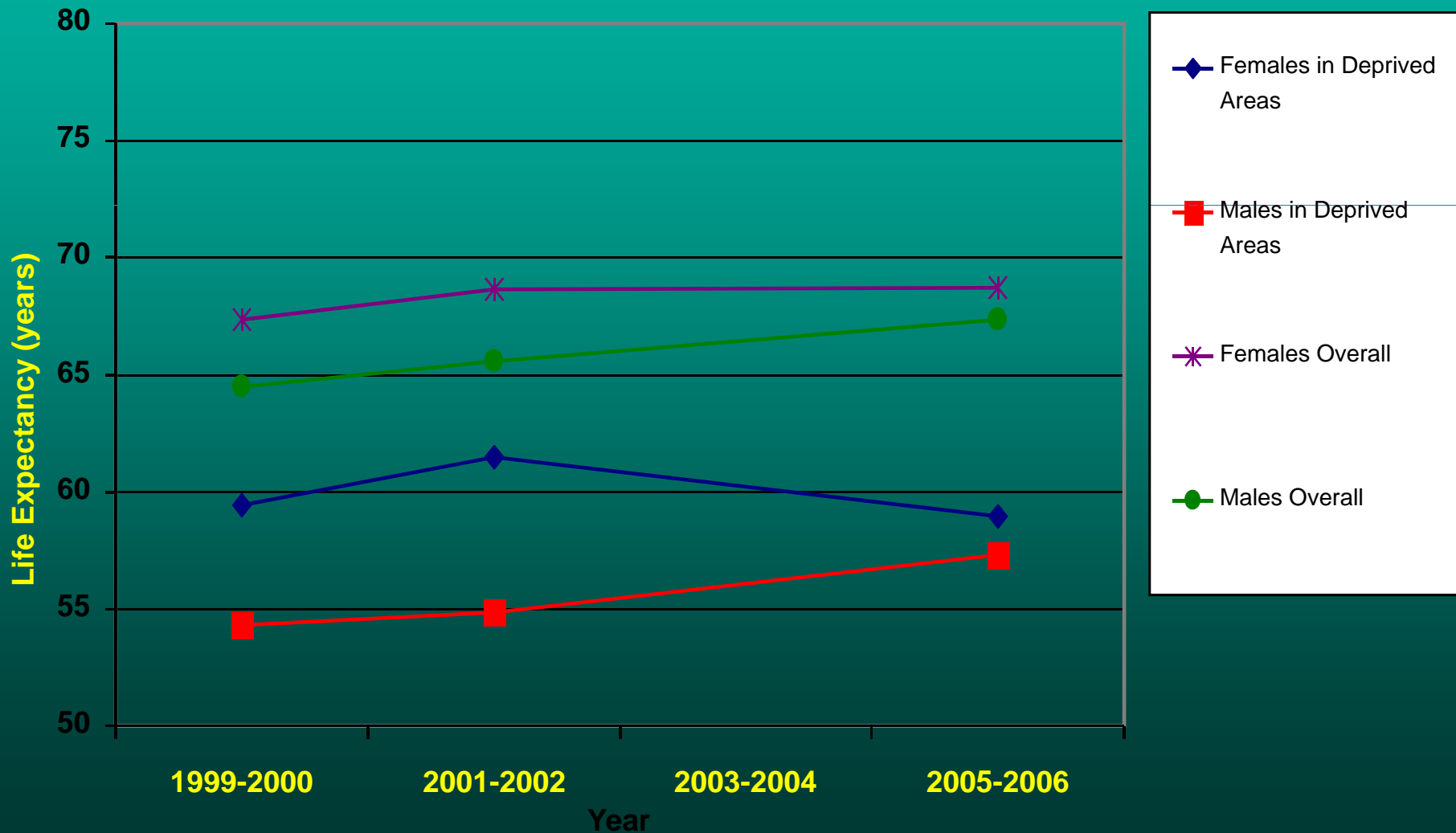


Life Expectancy (LE) and Healthy Life Expectancy (HLE) at Birth, 1980-2006

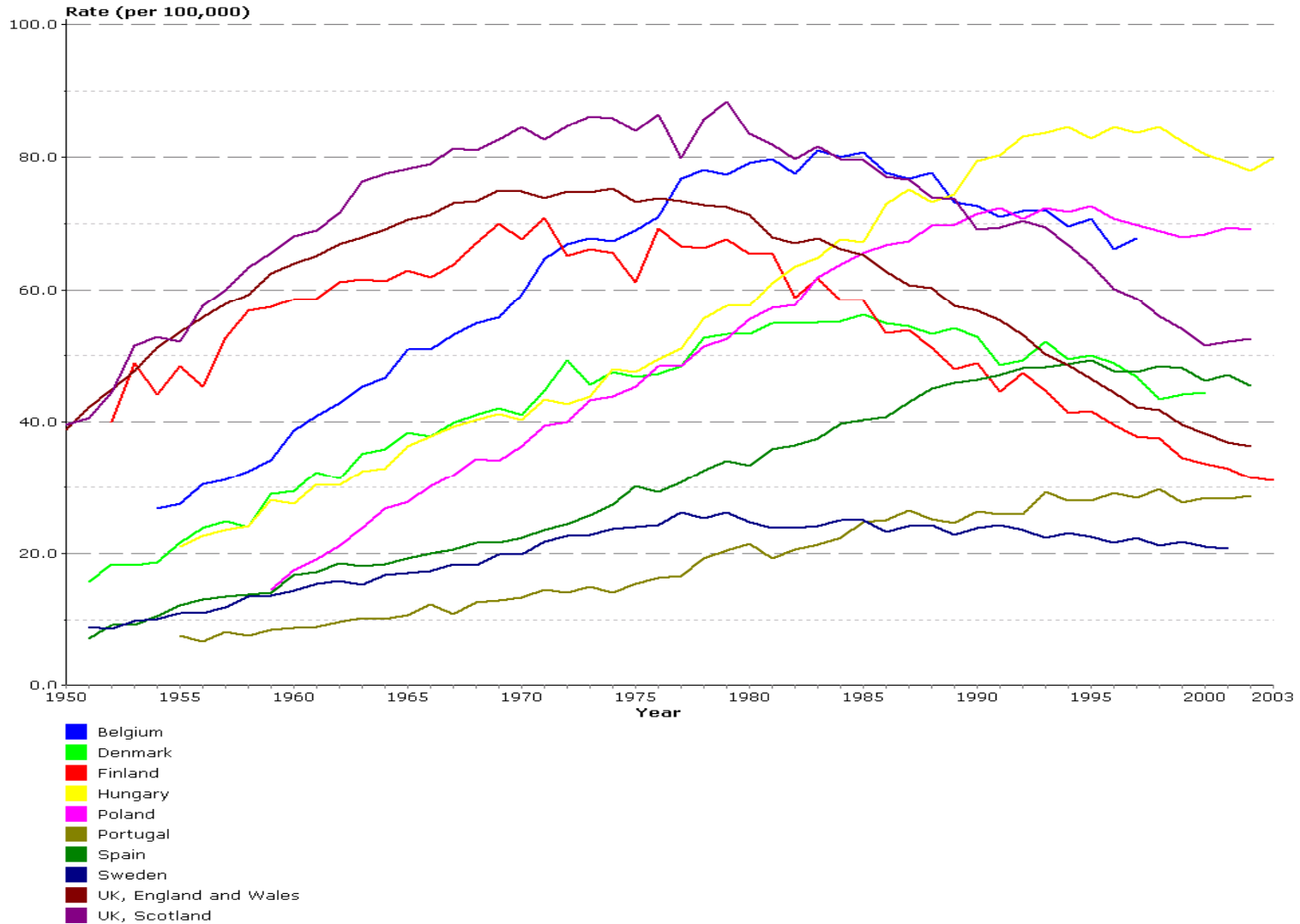


Healthy Life Expectancy at Birth

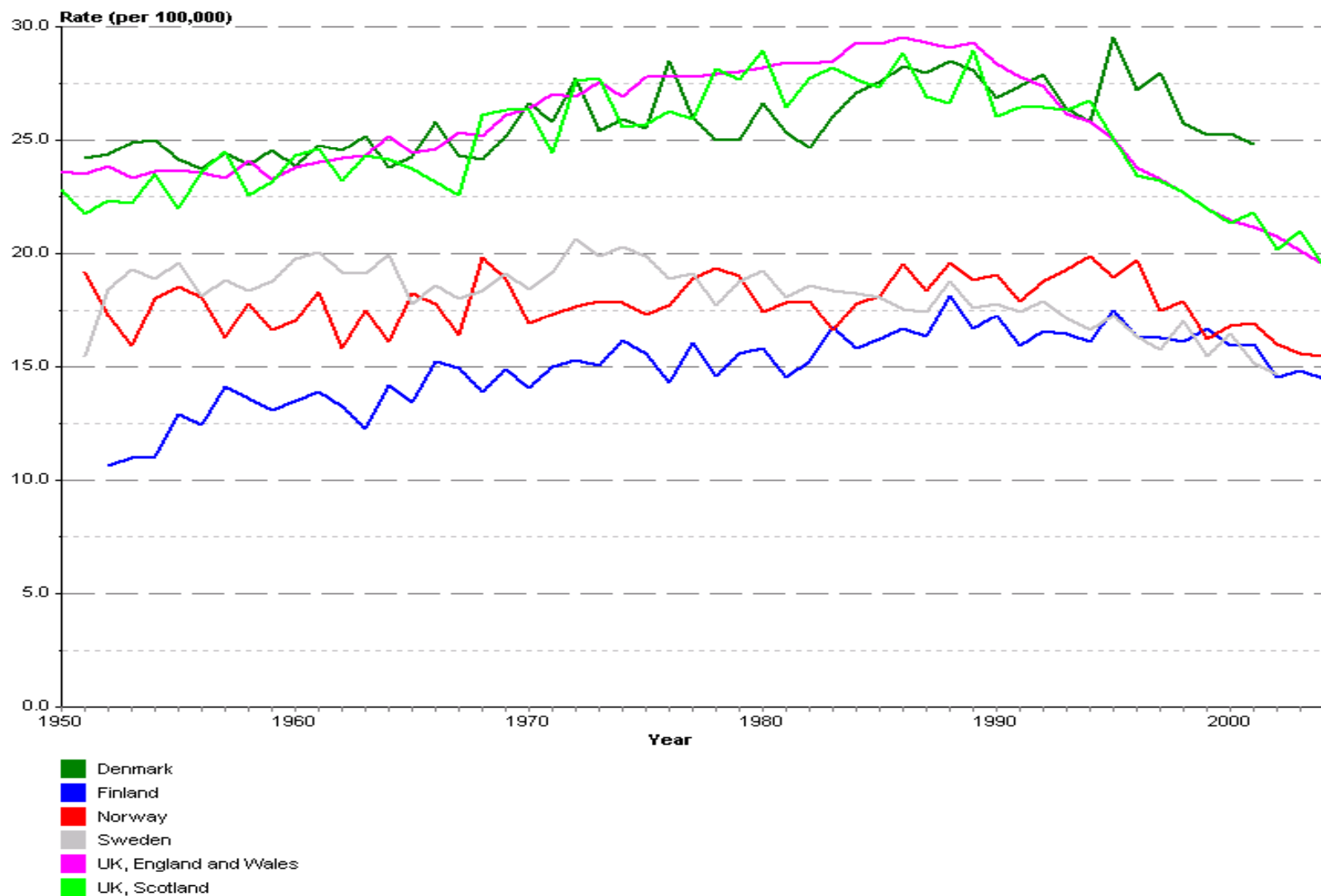
15% Most Deprived Areas



Lung cancer: trends in age-standardised mortality rates for selected European countries, males

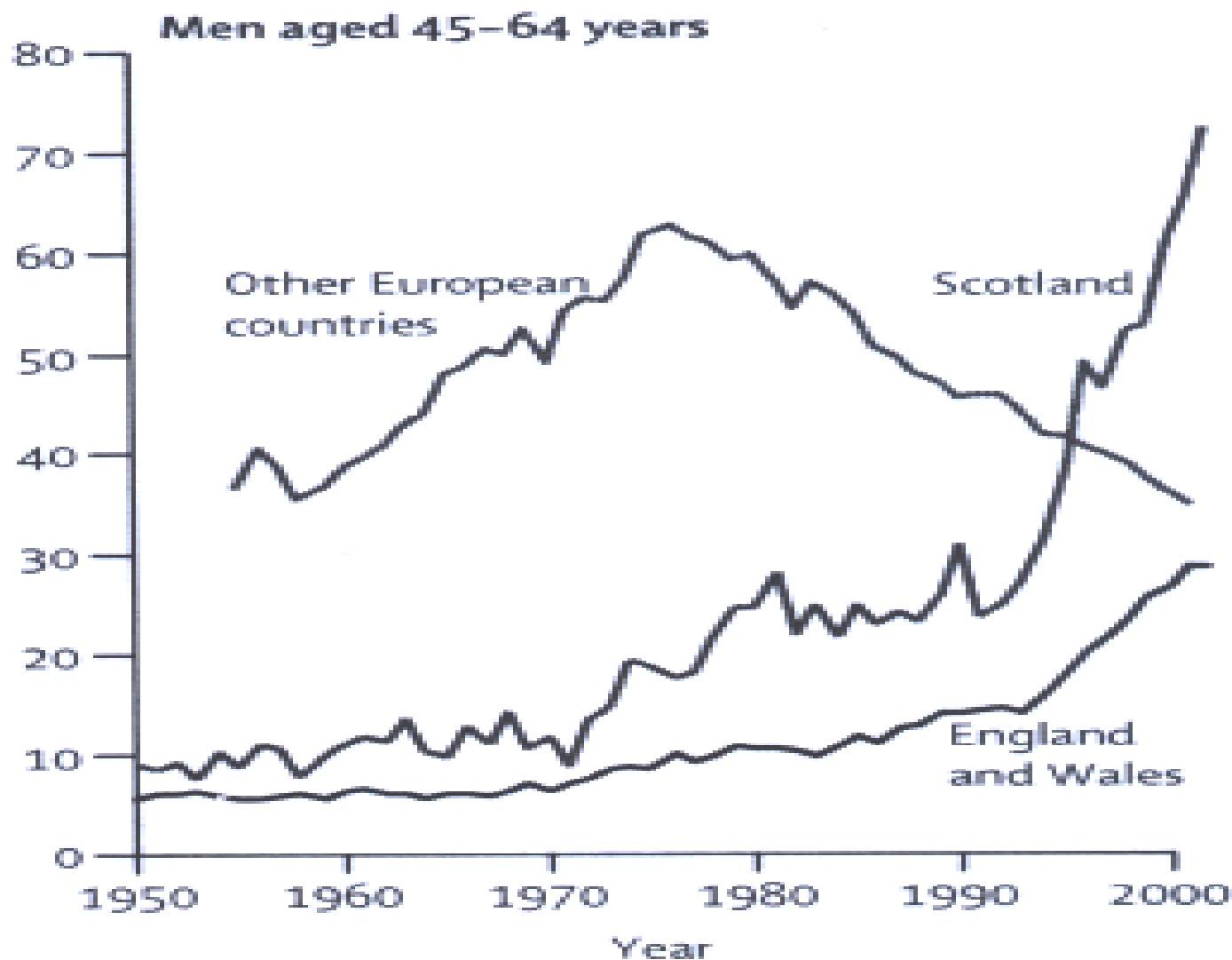


Invasive breast cancer: trends in age-standardised* mortality rates for selected countries, 1950-2004



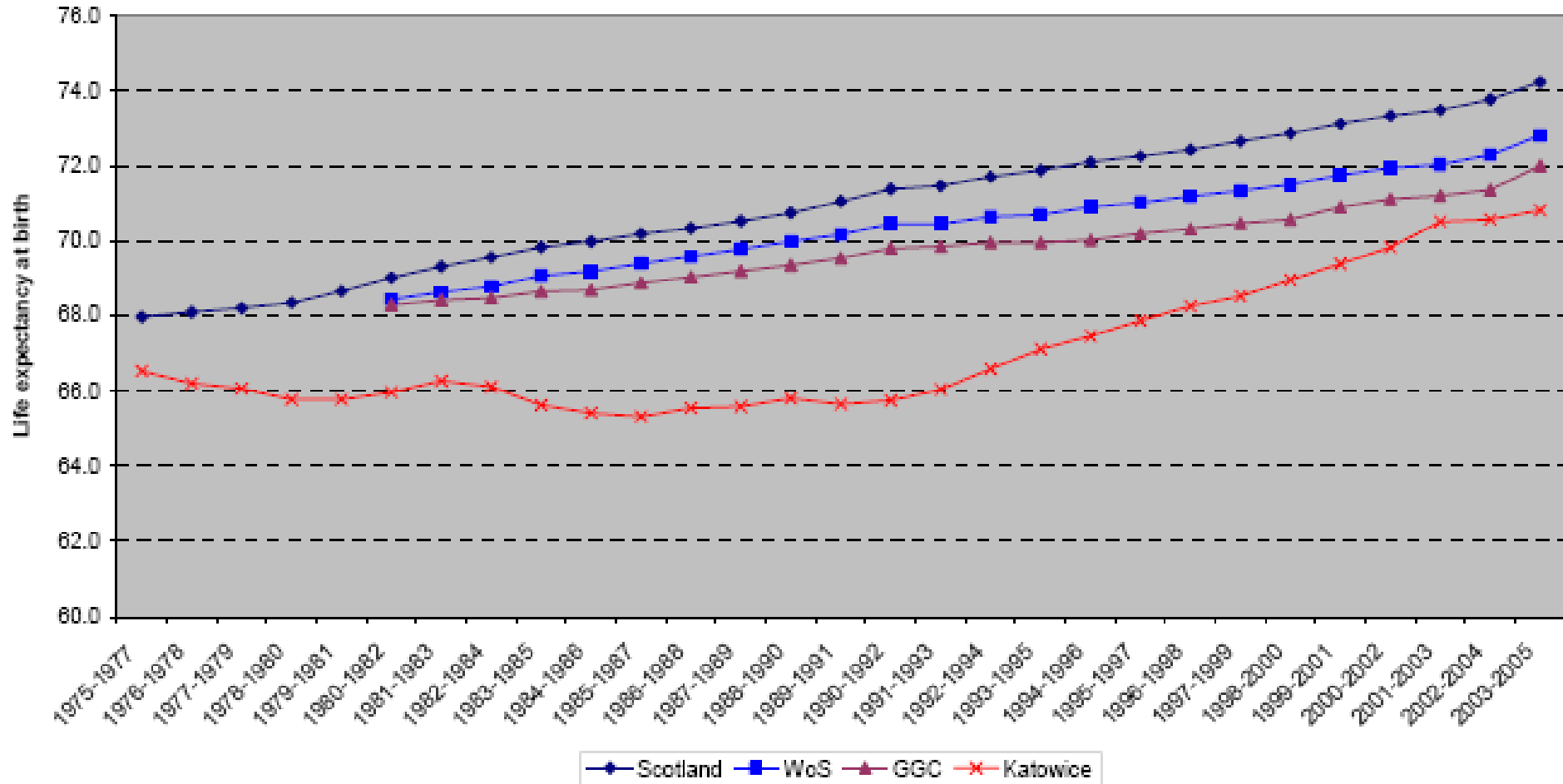
Sizing the problem: alcohol-related deaths

Male (45-64) liver cirrhosis mortality rates:



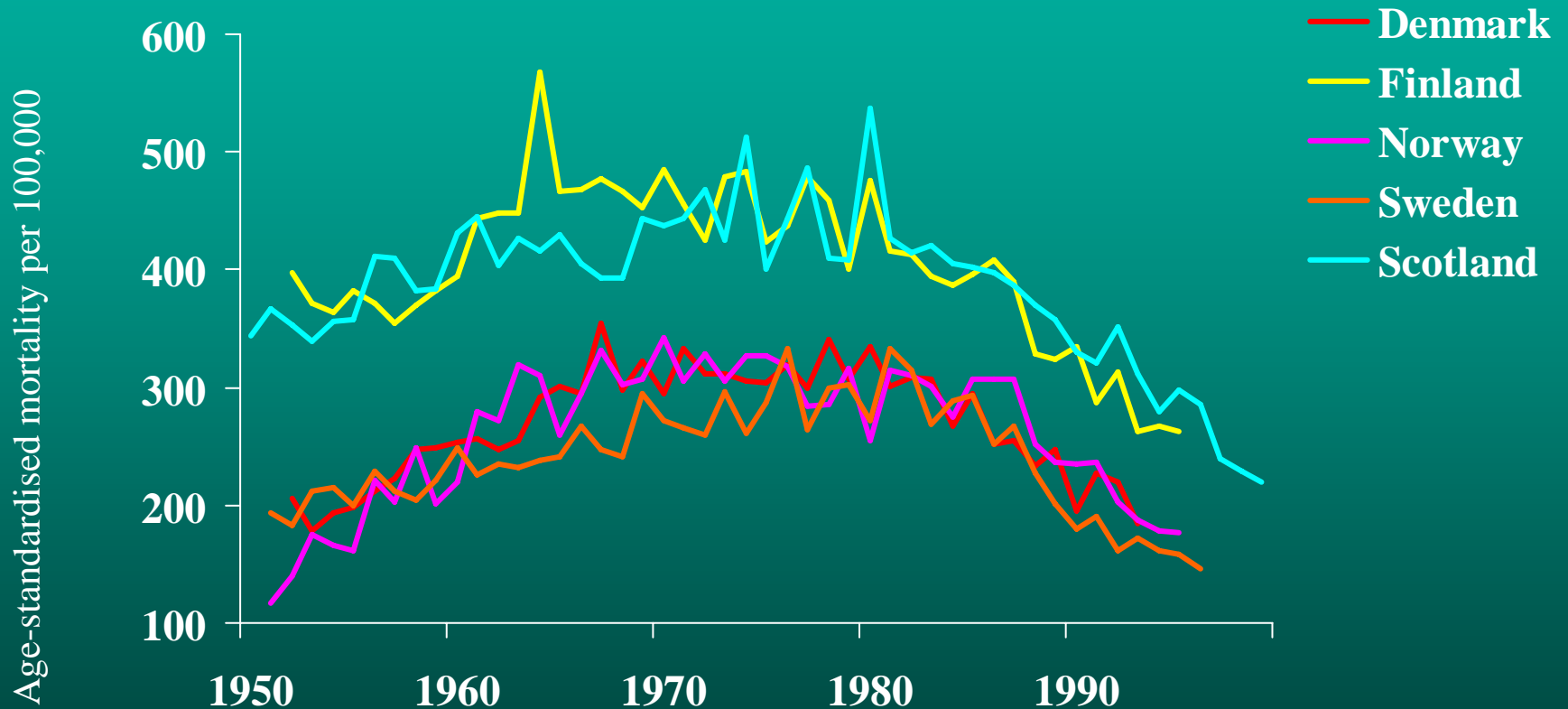
Estimates of male life expectancy at birth: Katowice compared to Scotland, West of Scotland and GGC, 1975-2005 (3-year averages)

Source: Calculated from data from GRO(S) (Scotland) and Cancer Center & Institute of Oncology, Warsaw

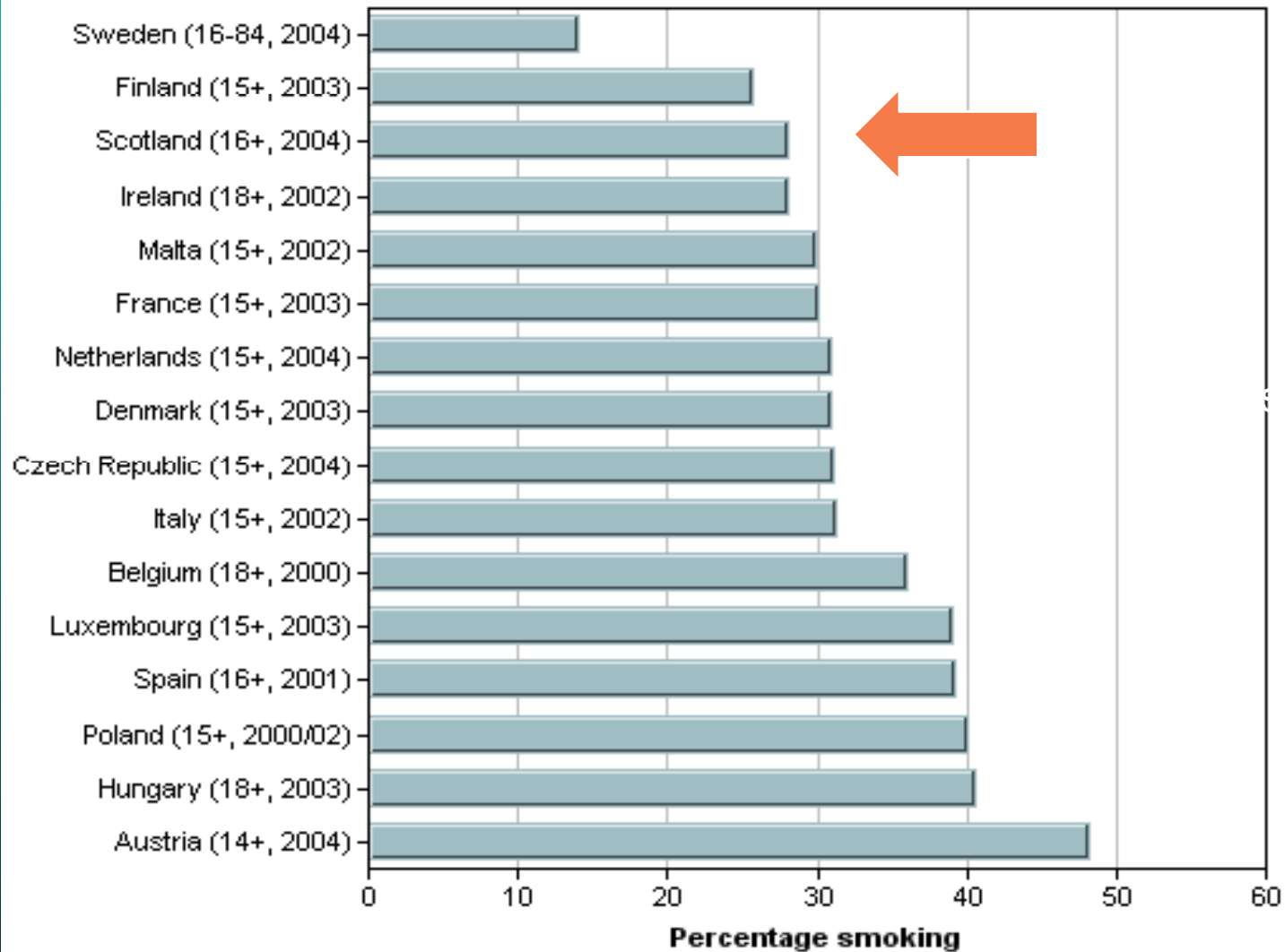


Coronary heart disease mortality

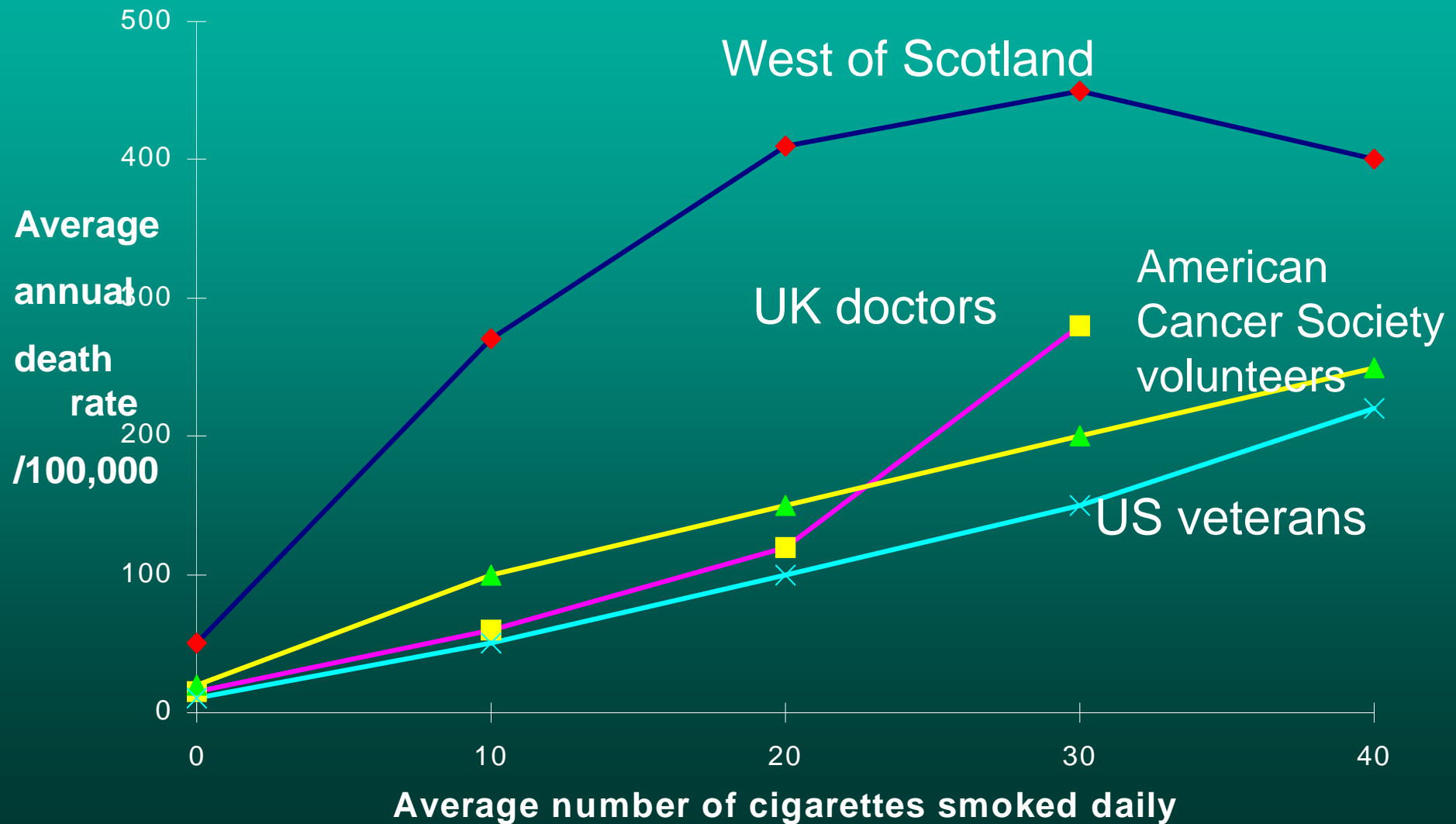
Men aged 15-74 years



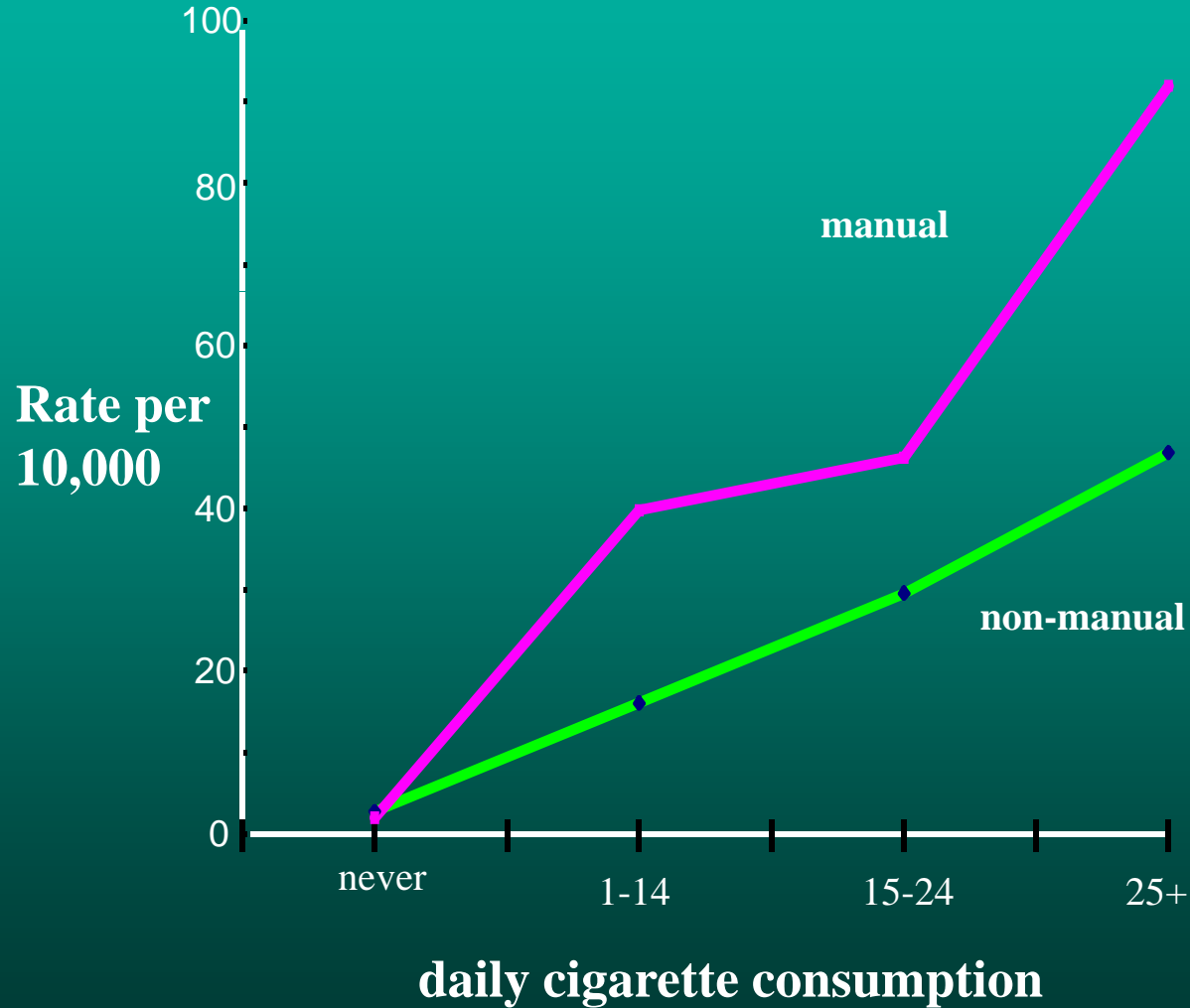
Smoking prevalence - Europe



Comparison of lung cancer mortality in West of Scotland and 3 major cohorts



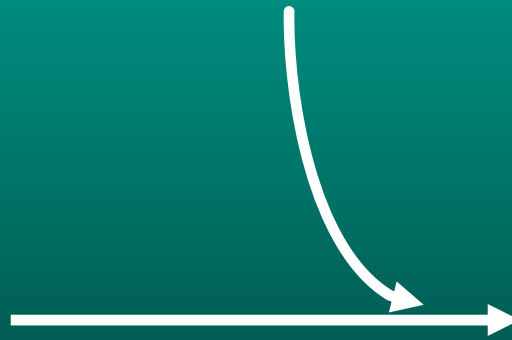
Lung cancer mortality by social class



Creating health

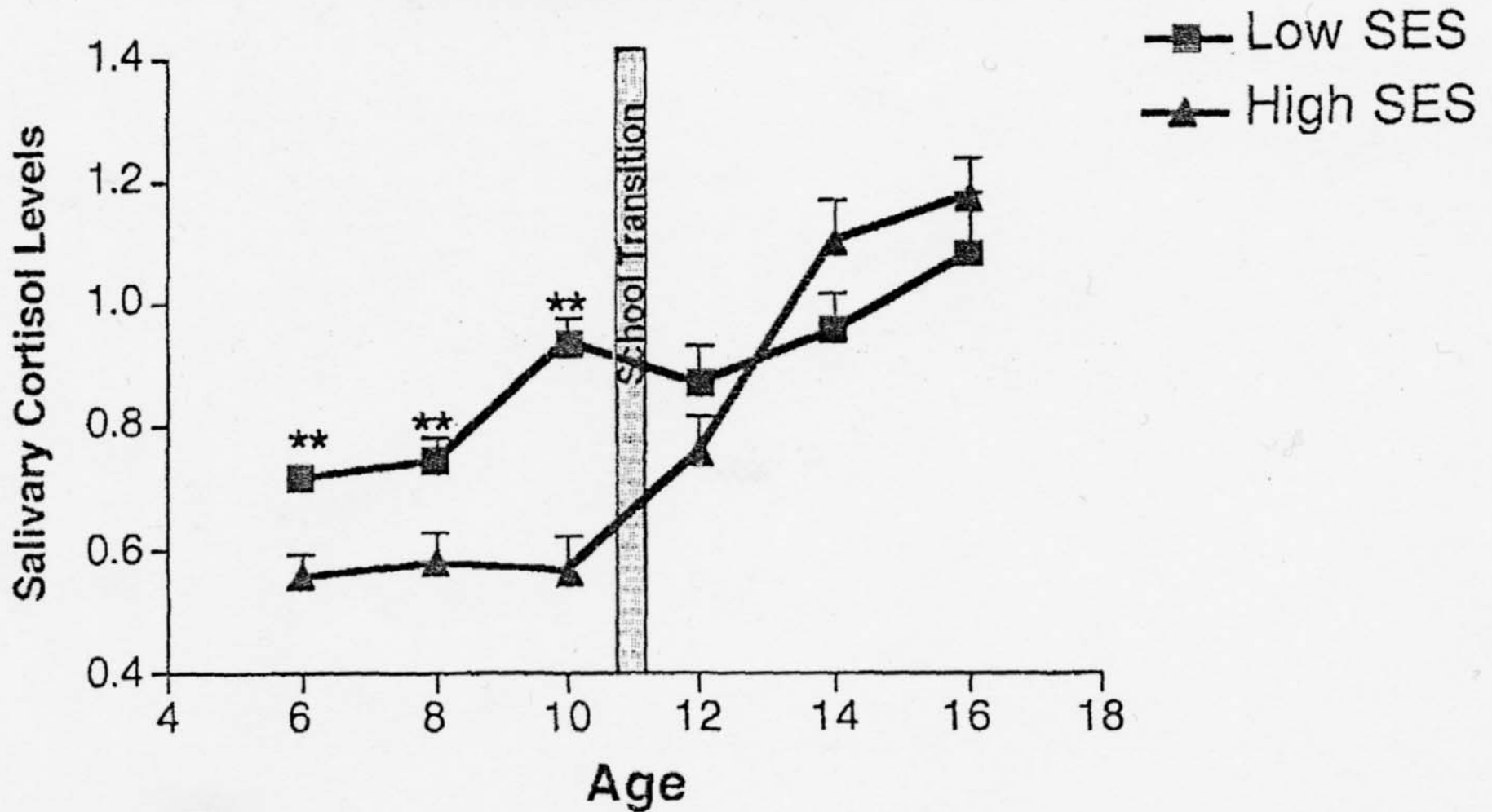
Consistency
Participation in shaping
Balance in stimulation

Challenge
Response
Stress
Tension
Resolution

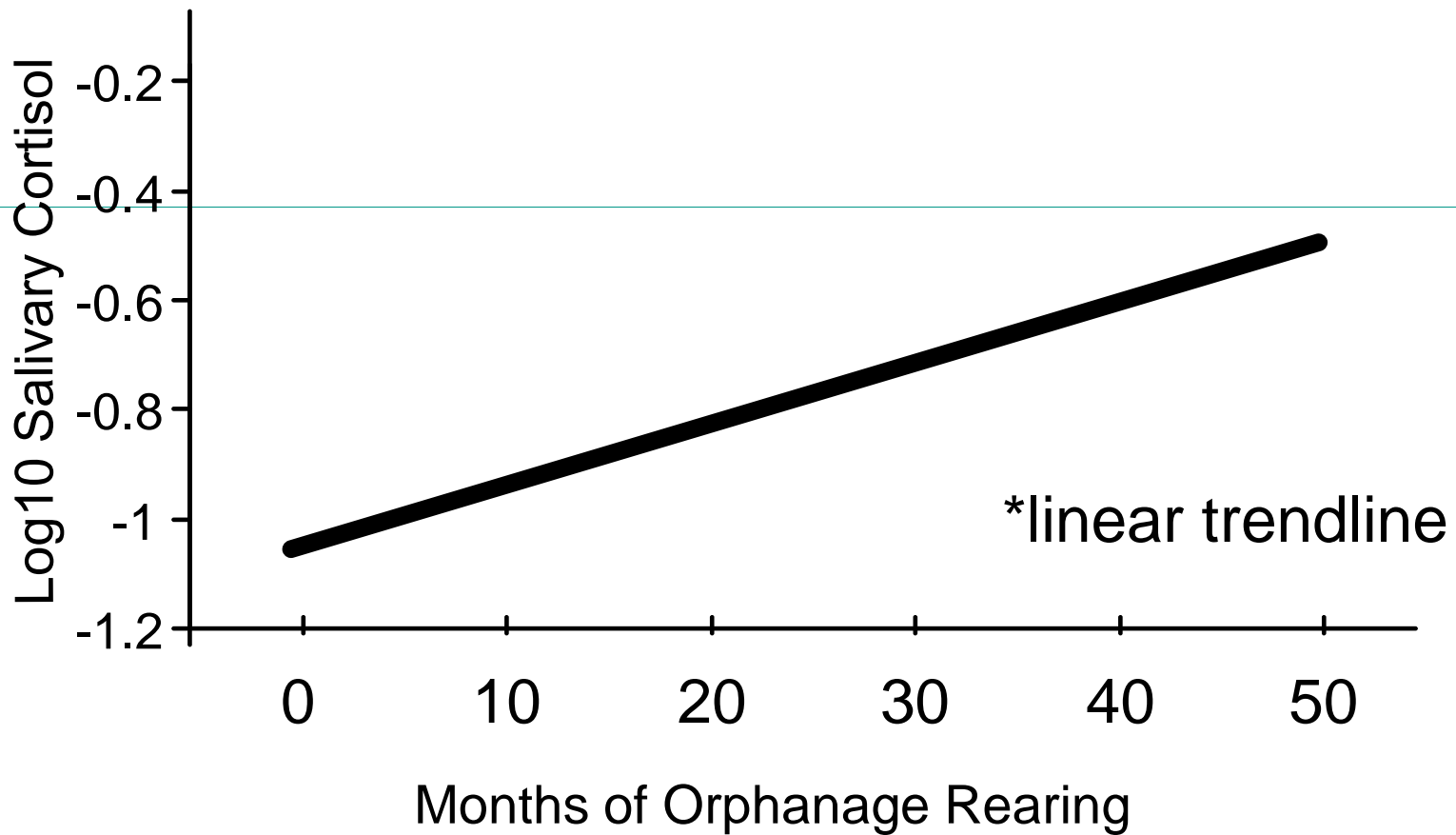


Successful
stress
management

Cortisol Levels



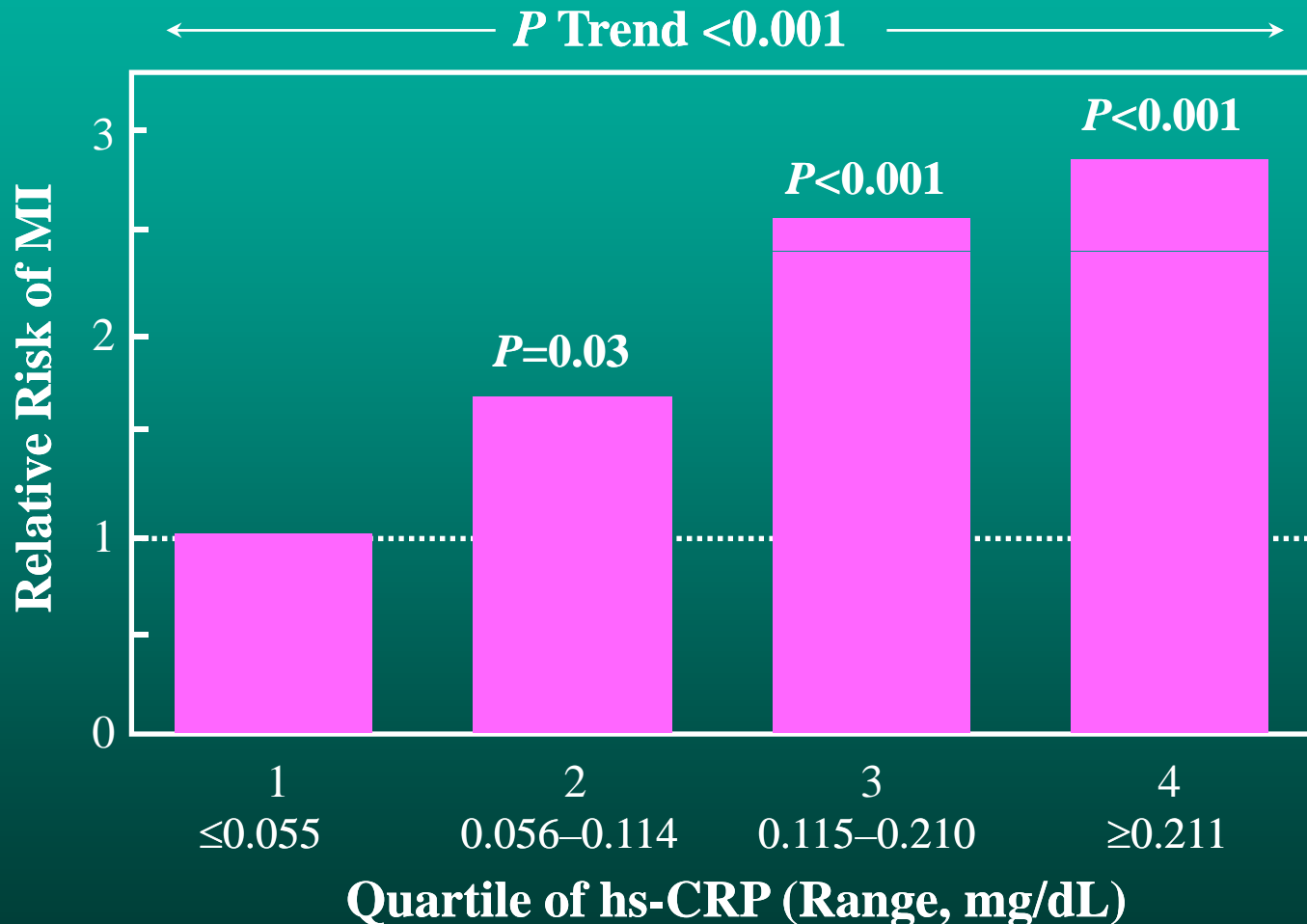
Evening Cortisol Levels Increase with Months of Orphanage Rearing *



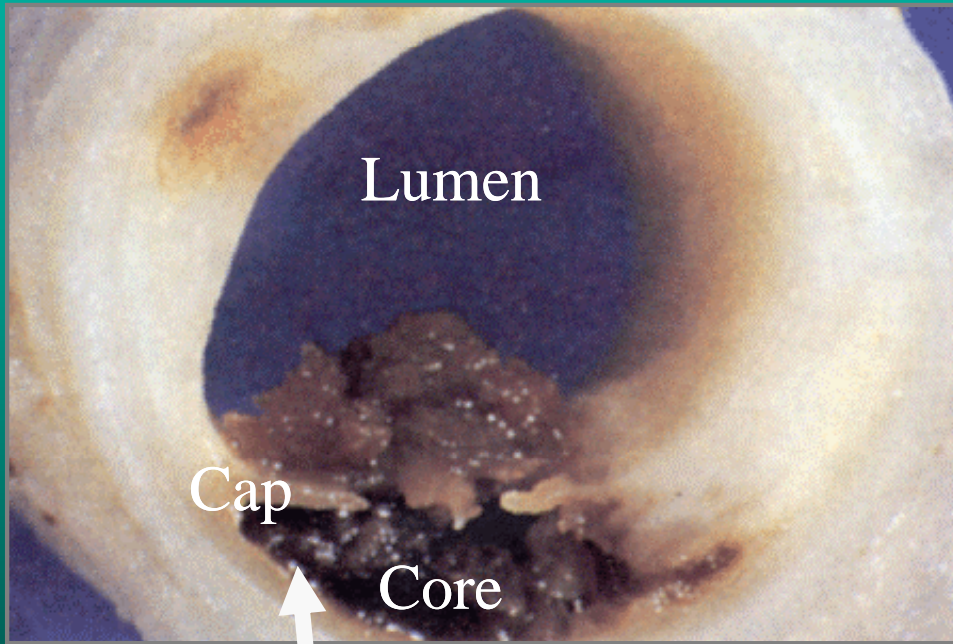
Environmental determinants of inflammatory status

	Depcat	% smokers	CRP (median) mg/dl	
			Never-smokers	Smokers
affluent	1	36.8	0.71	1.42
	2	35.9	1.00	2.34
	3	39.1	1.11	2.25
	4	44.1	1.21	2.44
	5	46.6	1.13	2.53
	6	49.3	1.25	3.07
deprived	7	55.5	1.48	3.29

hs-CRP and Risk of Future MI in Apparently Healthy Men



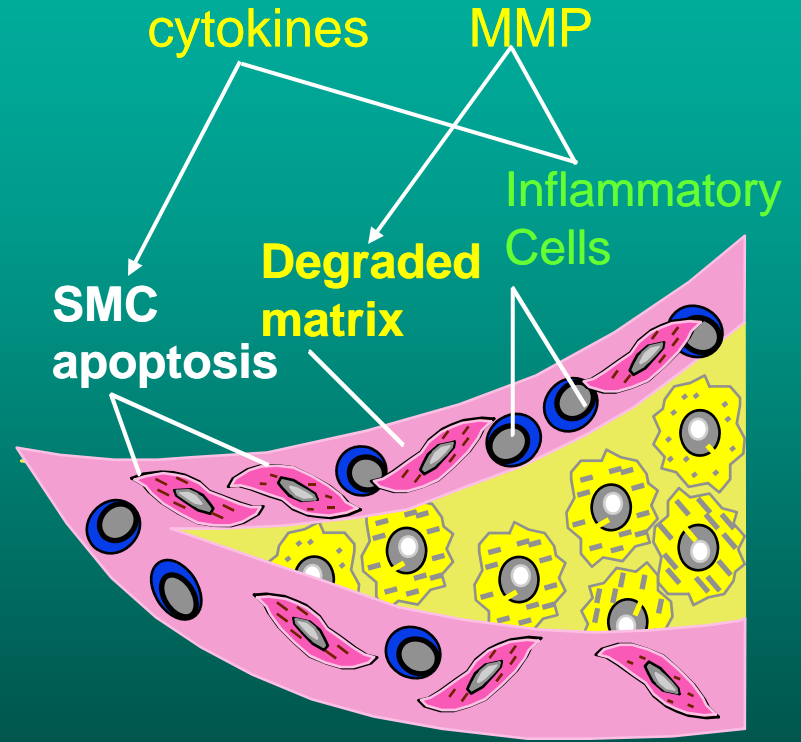
Inflammation in plaques



Inflammatory cells

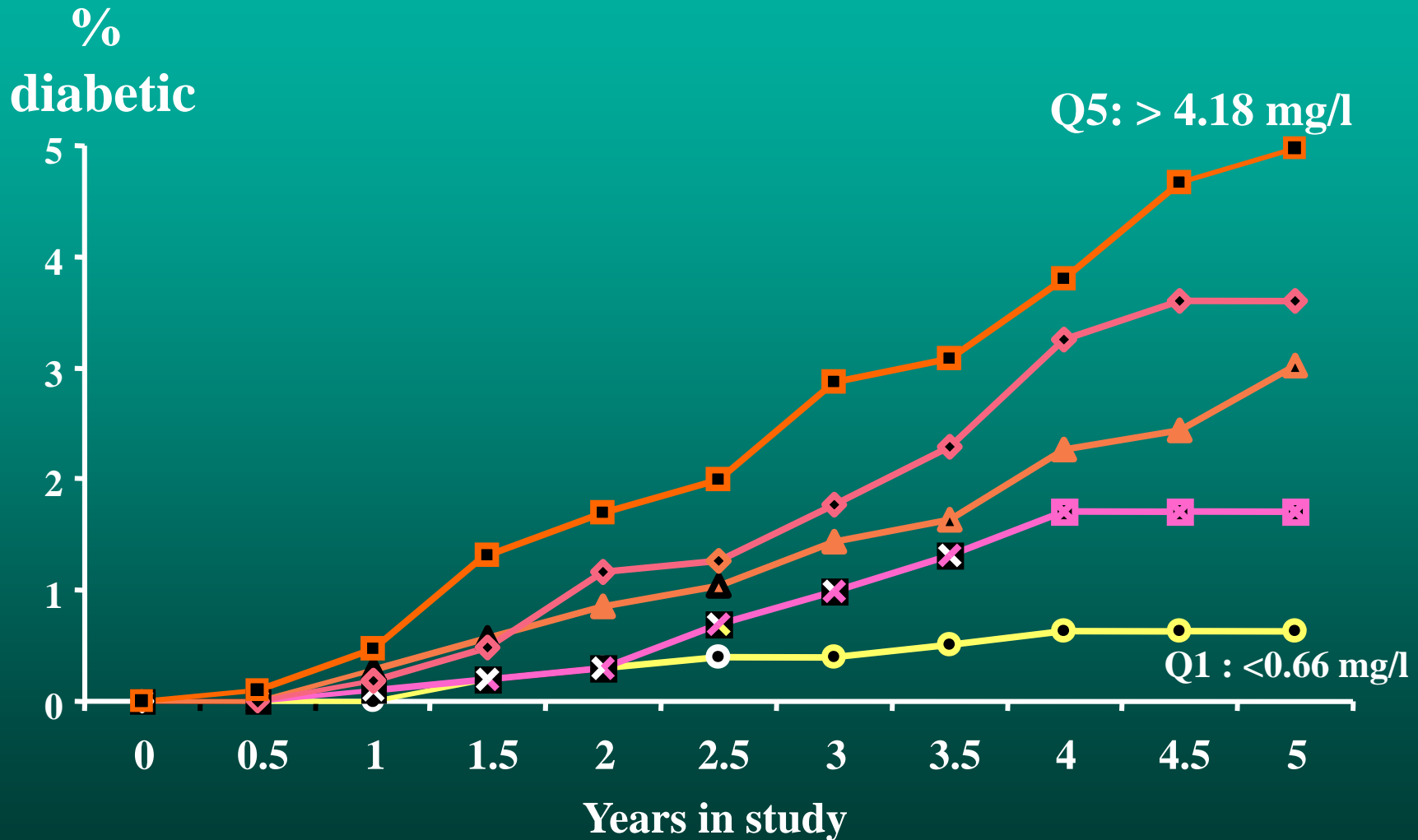


MMPs, IL-6,
IL-15, IL-18, CRP



Unstable Thin
Fibrous Cap

CRP and cumulative risk of type 2 diabetes



Adipocyte programming

insulin resistance, inflammation and ALP

skeletal muscle

Insulin resistance

NEFAs

triglyceride↑

Low HDL
small LDL

Atherogenic
Lipoprotein
Phenotype

liver

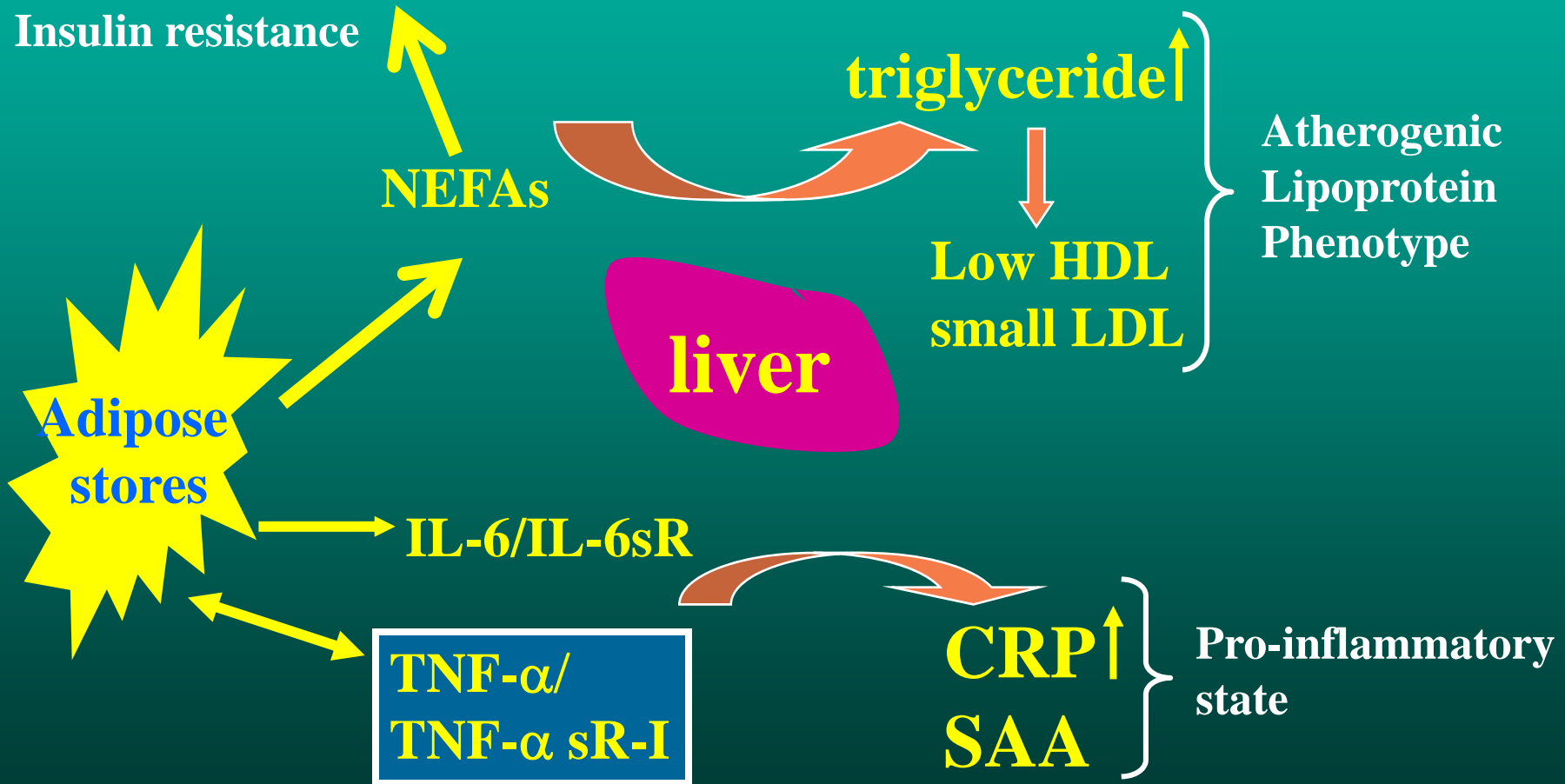
Adipose
stores

IL-6/IL-6sR

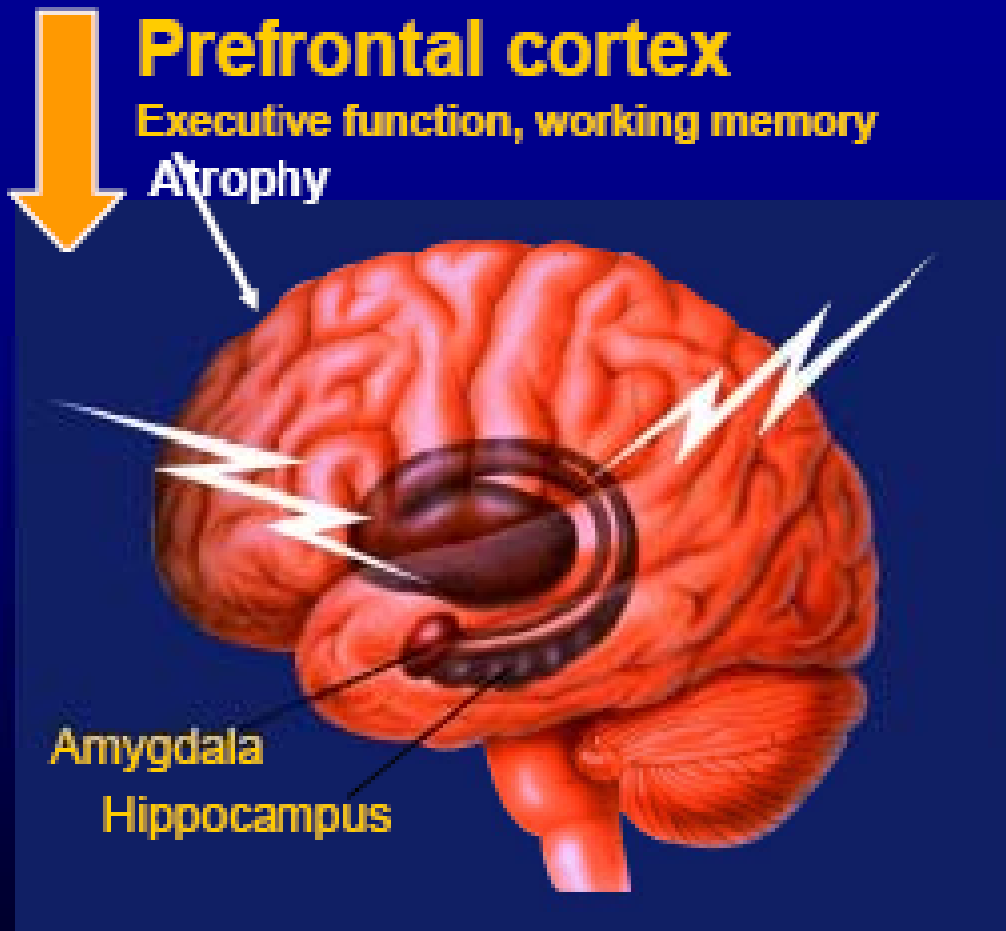
TNF- α /
TNF- α sR-I

CRP↑
SAA

Pro-inflammatory
state



The Human Brain Under Stress: key brain regions



Prefrontal cortex

Executive function, working memory

Atrophy

Hippocampus

Contextual, episodic, spatial
memory

Atrophy

Amygdala

Emotion, fear, anxiety

Hypertrophy.

later atrophy

Image size: 1024 x 1024
View size: 1266 x 618
X: 290 px Y: 297 px Value: 430
WL: 715 WW: 1430

H

unnamed
498
SAG FSE T2
TR: 4220.0, TE: 96.4

A



Im: 3/12
Zoom: 178% Angle: 0
Thickness: 3.0 mm Location: -27.8
X: -25.81 mm Y: -63.50 mm Z: 24.90 mm

F

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“

scotland's health is improving rapidly but it is not improving fast enough for the poorest sections of our society. Health inequalities ... remain our major challenge.

”

equally
well

report of the ministerial task force on health inequalities



The Scottish
Government

The most significant inequalities:

- ◆ Children's very early years, which influence the rest of their lives.
- ◆ The high economic, social and health burden imposed by mental illness, and the requirement to improve mental wellbeing.
- ◆ The “Big Killers” including cardio-vascular disease and cancer. Risk factors for these, such as smoking, are strongly linked to deprivation.
- ◆ Drug and alcohol problems and links to violence that affect younger men in particular and where inequalities are widening.

Task Force's recommendations

- ◆ Support for families and young people
- ◆ Mental health and wellbeing
- ◆ Poverty and employment
- ◆ Physical environments
- ◆ Alcohol, drugs, violence

Recommendations for health services:

- ◆ Anticipatory care
- ◆ Primary care
- ◆ Smoking
- ◆ Vulnerable groups and diversity
- ◆ NHS wider role

Anticipatory care

- ◆ Early detection and management of risk factors in the most deprived sectors of society
- ◆ Letters, phone calls, home visits, follow up in the pub!

Cholesterol lowering drugs

Best available evidence suggests that uptake of this therapy is likely to be around 20% lower than estimated need. Currently, it is thought that around 8,000 patients in the test area are on this therapy, suggesting that 1500 more should be getting it. If these patients were identified and treated **around 120 significant cardiac events would be avoided in the CHP each year**

Controlling high blood pressure

In east Glasgow, there are 225 admissions for stroke each year from its 60,000 population. If all patients with high blood pressure were identified and treated, and if treatment was 50% successful, **16- 76 admissions for stroke would be avoided each year.** Around 10 deaths might not occur.

Smoking cessation services

- ◆ It is estimated that there are 220 smoking related deaths each year. If everyone living there was offered smoking cessation advice, based on current success rates, **14-48 of these deaths could be avoided each year.**

Test area – causes of death

	Number of deaths	Current SMR	Possible SMR
Heart disease	186	146	113
Stroke	77	112	98
All cancer	215	135	122
Lung cancer	72	168	132

Delivering change:

- ◆ Public services and client pathways
- ◆ Test sites and learning networks
- ◆ Using resources effectively
- ◆ Clear outcomes, performance reporting and performance management
- ◆ Short and long timescales
- ◆ Evaluation and review

Tackling poor health

- ◆ Smoking, abuse of alcohol and drugs, obesity and lack of exercise damage health and need to be addressed
- ◆ Poverty, unemployment, poor educational attainment all damage self esteem and sense of control
- ◆ Consistent, supportive and nurturing early life provide the basis for successful social and physical development into adulthood