

AZIENDA OSPEDALIERA  
SANT' ANDREA

UNIVERSITÀ DI ROMA "LA SAPIENZA"  
SECONDA FACOLTÀ  
DI MEDICINA E CHIRURGIA



*Regione Lazio*



SAPIENZA  
UNIVERSITÀ DI ROMA



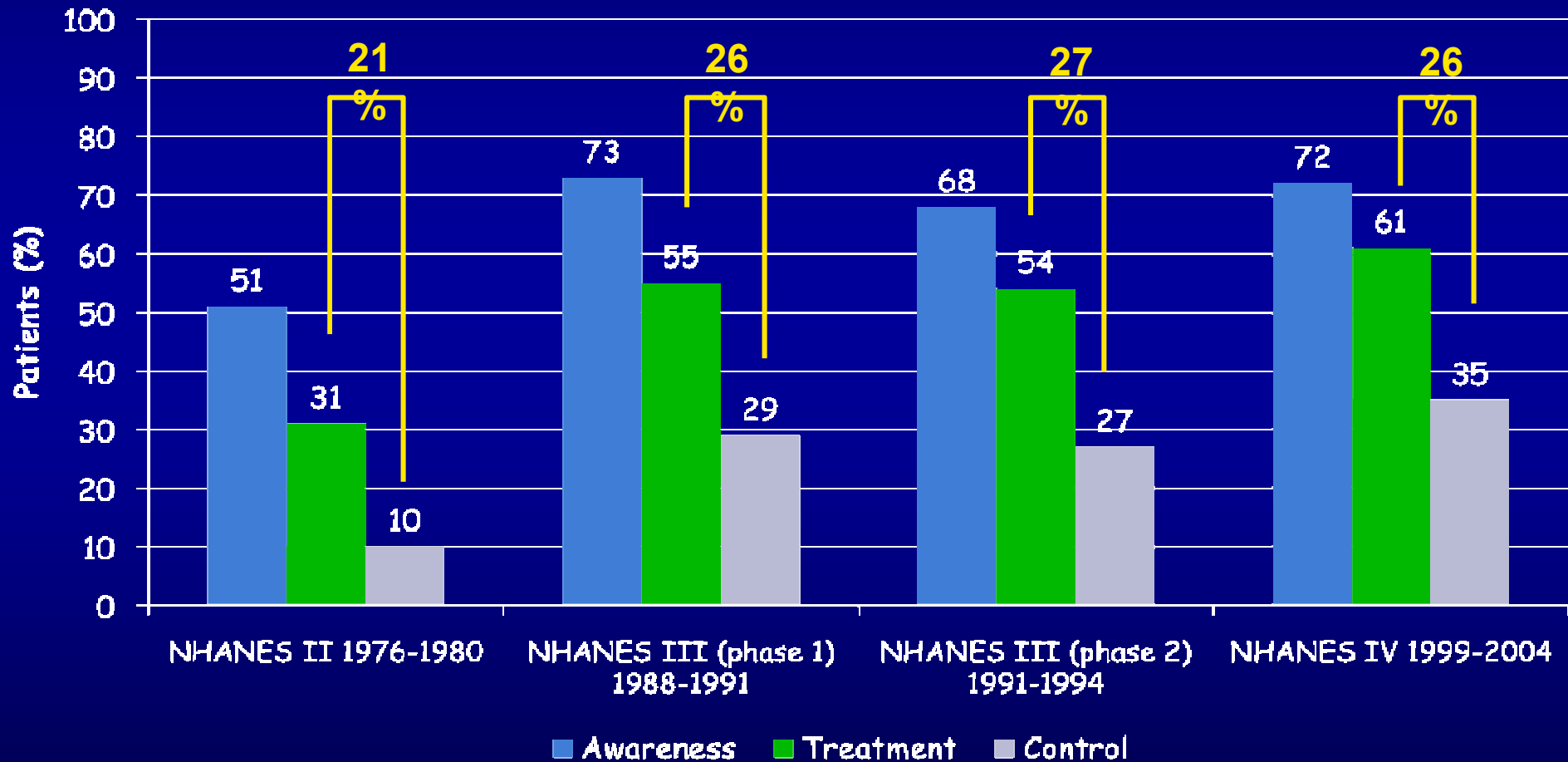
# BP control in Italy

Prof. Massimo Volpe, MD, FAHA, FESC,  
President, Italian Society of Cardiovascular  
Prevention

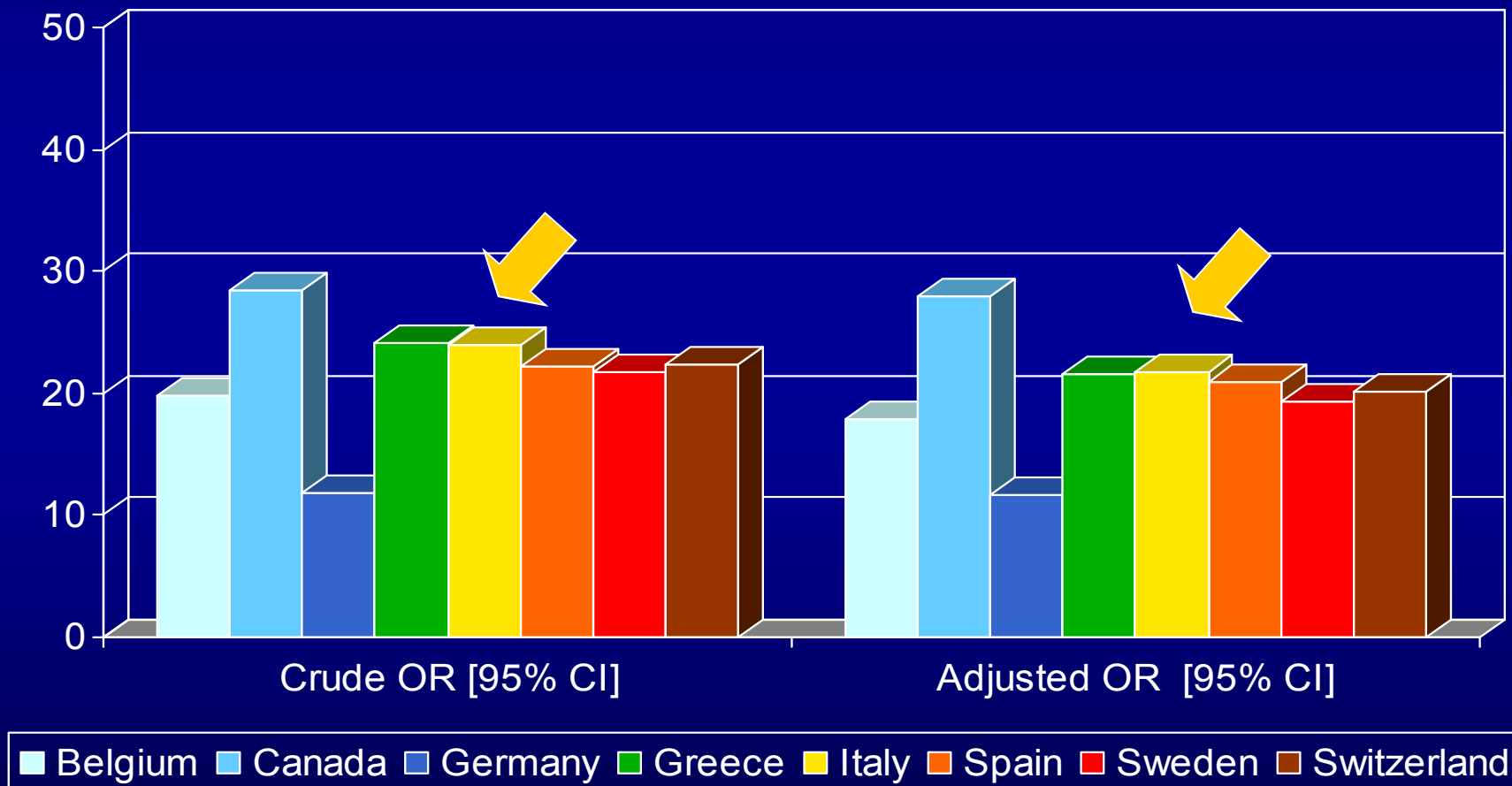
II Faculty of Medicine  
University of Rome "La Sapienza"  
Chair and Division of Cardiology  
Sant'Andrea Hospital of Rome - Italy  
e-mail: [massimo.volpe@uniroma1.it](mailto:massimo.volpe@uniroma1.it)

# Rates of Awareness, Treatment, and Control of High Blood Pressure in the United States (1976-2004)

Percentage of patients with uncontrolled BP did not change over the years!

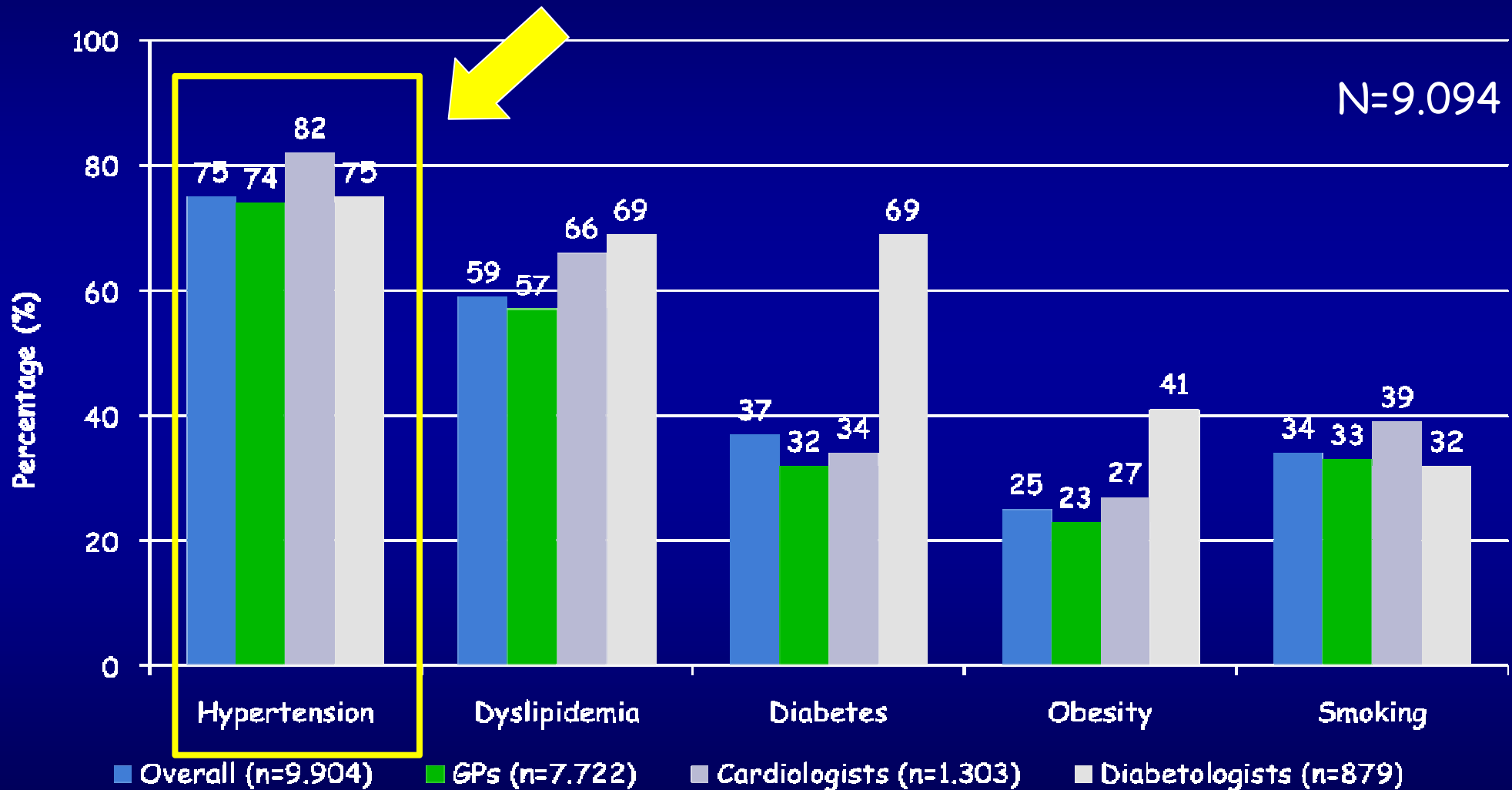


# A global perspective on BP treatment and control in a referred cohort of hypertensive patients (I-SEARCH, n=22,282)



## EFFECTUS Study

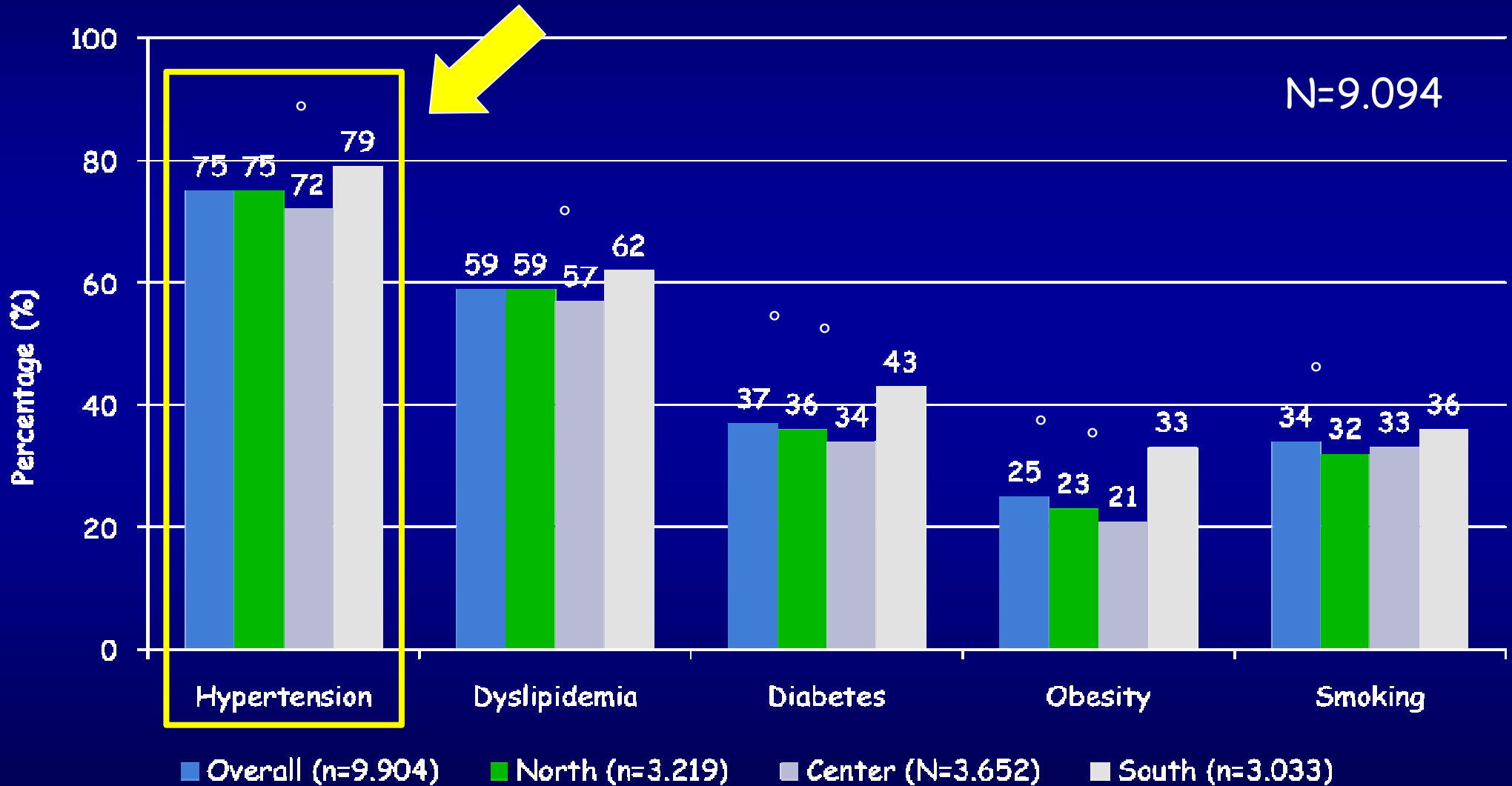
Hypertension is the most prevalent cardiovascular risk factor independently by the clinical settings in Italy



\*p<0.001 vs GPs; #p<0.001 vs Cardiologists.

# EFFECTUS Study

Hypertension is the most prevalent cardiovascular risk factor independently by the macro-areas in Italy



Tocci G, Volpe M, et al. Nutr Metab Cardiovasc Dis 2010;

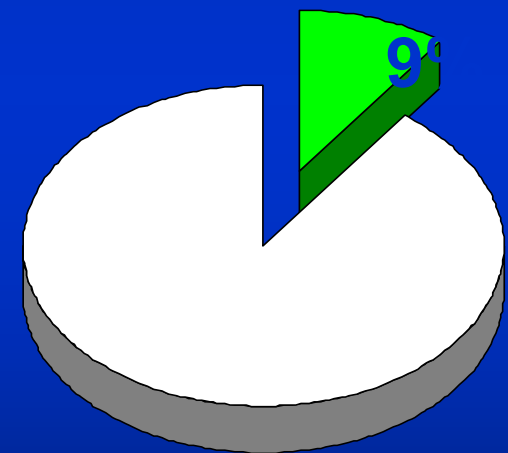
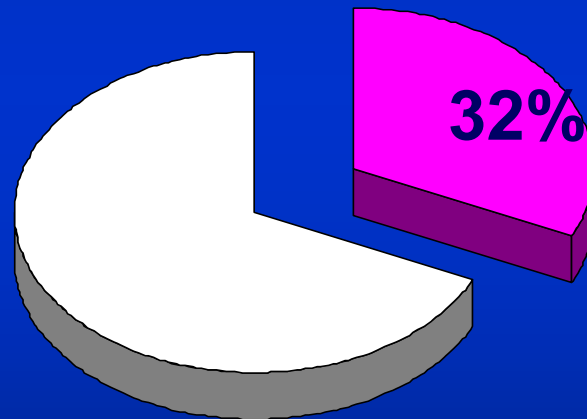
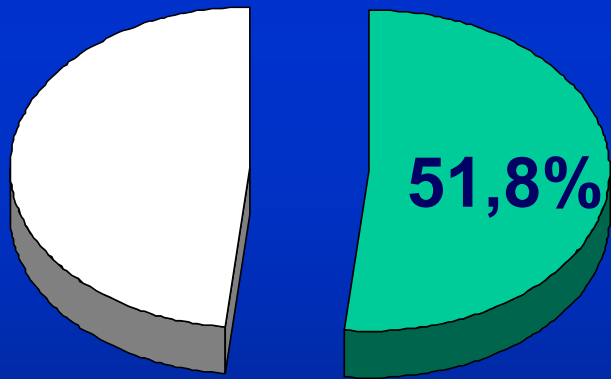
\*p<0.001 vs Center; °p<0.001 vs South

# Ipertensione in ITALIA: Consapevolezza, Trattamento, Controllo

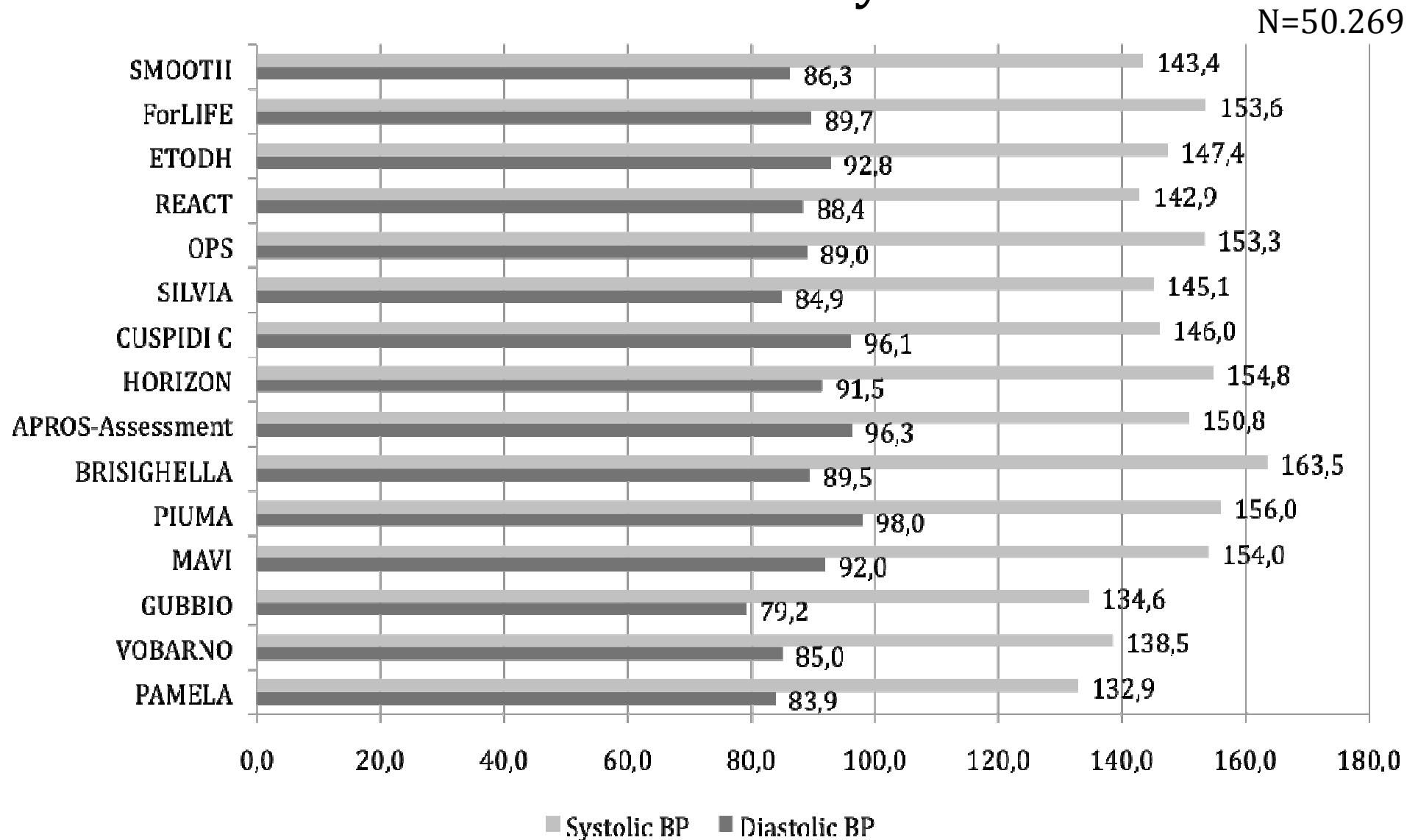
 pz consapevoli di  
essere ipertesi

 ipertesi  
trattati

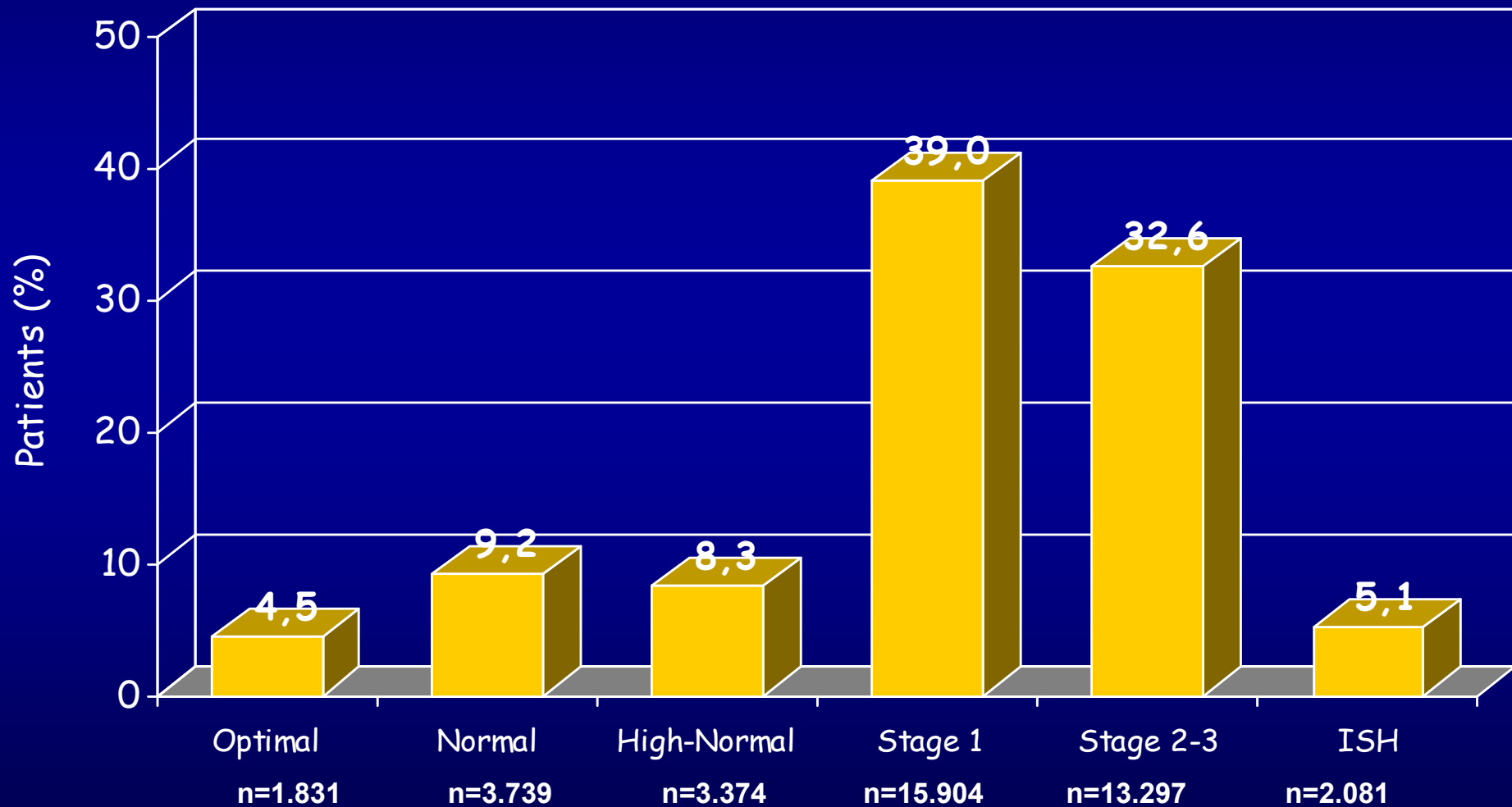
 ipertesi  
trattati controllati



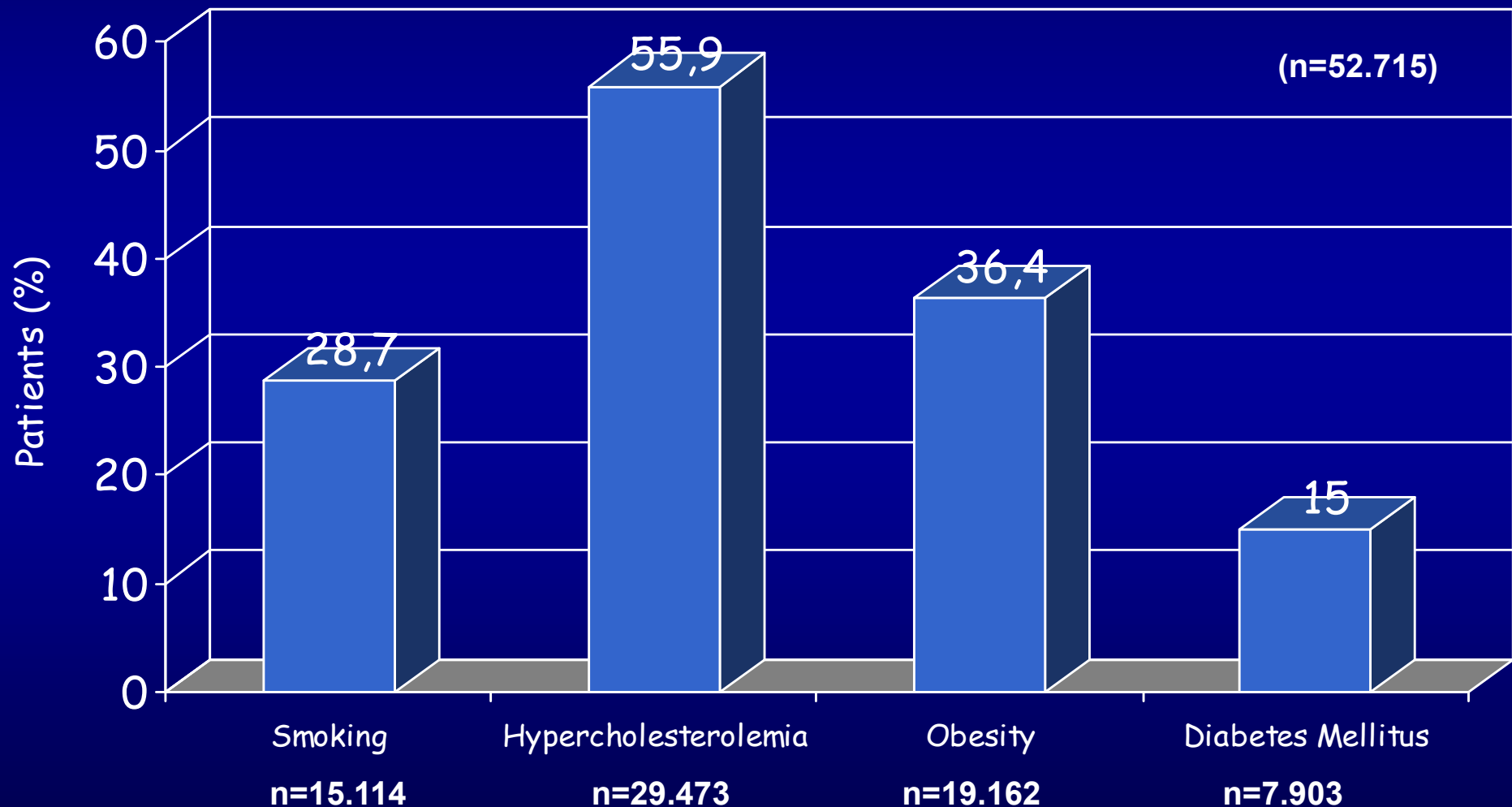
# Systolic and Diastolic BP levels in Hypertension Surveys performed between 2000- 2005 in Italy



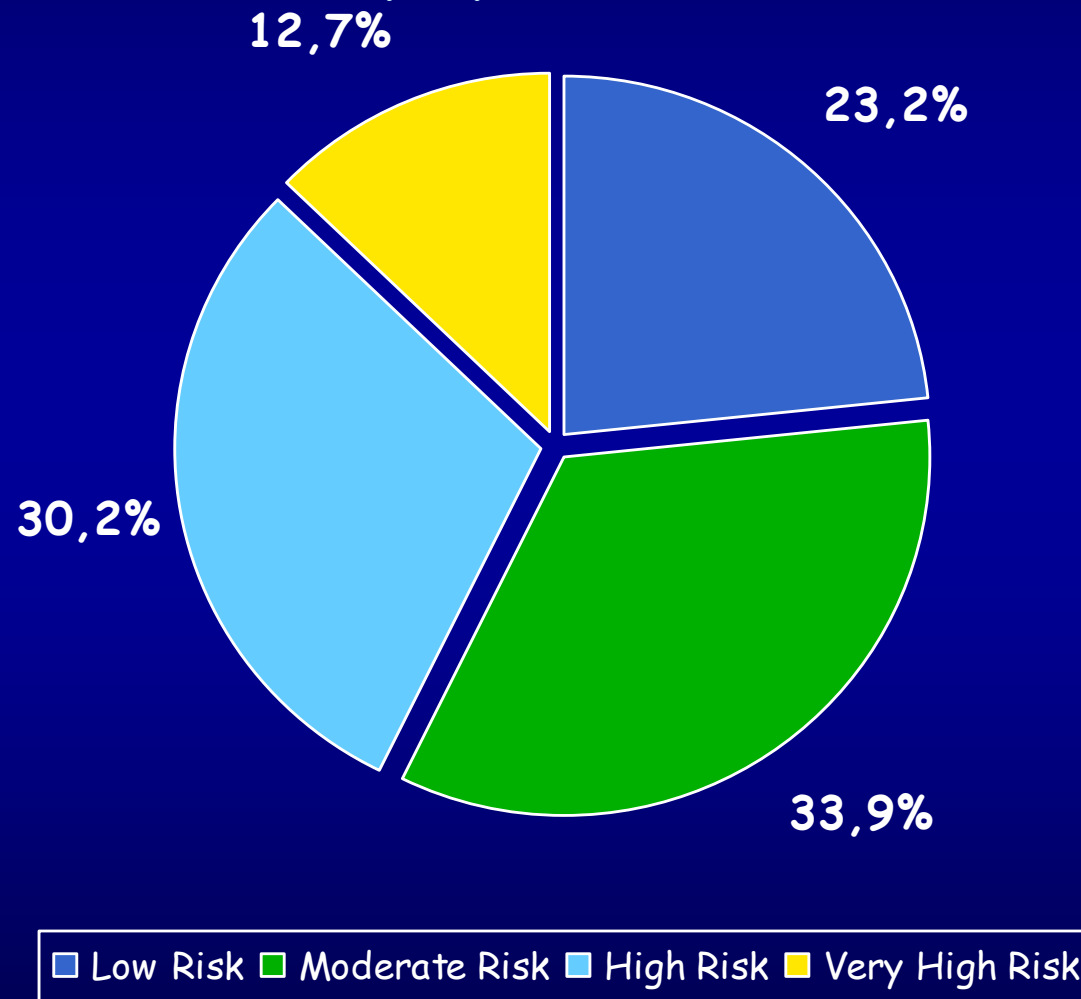
# BP stratification according with 2003 ESH/ESC guidelines in Italian hypertensive patients included in population and clinical surveys



# Prevalence of cardiovascular Risk Factors in Italian hypertensive patients included in population and clinical surveys

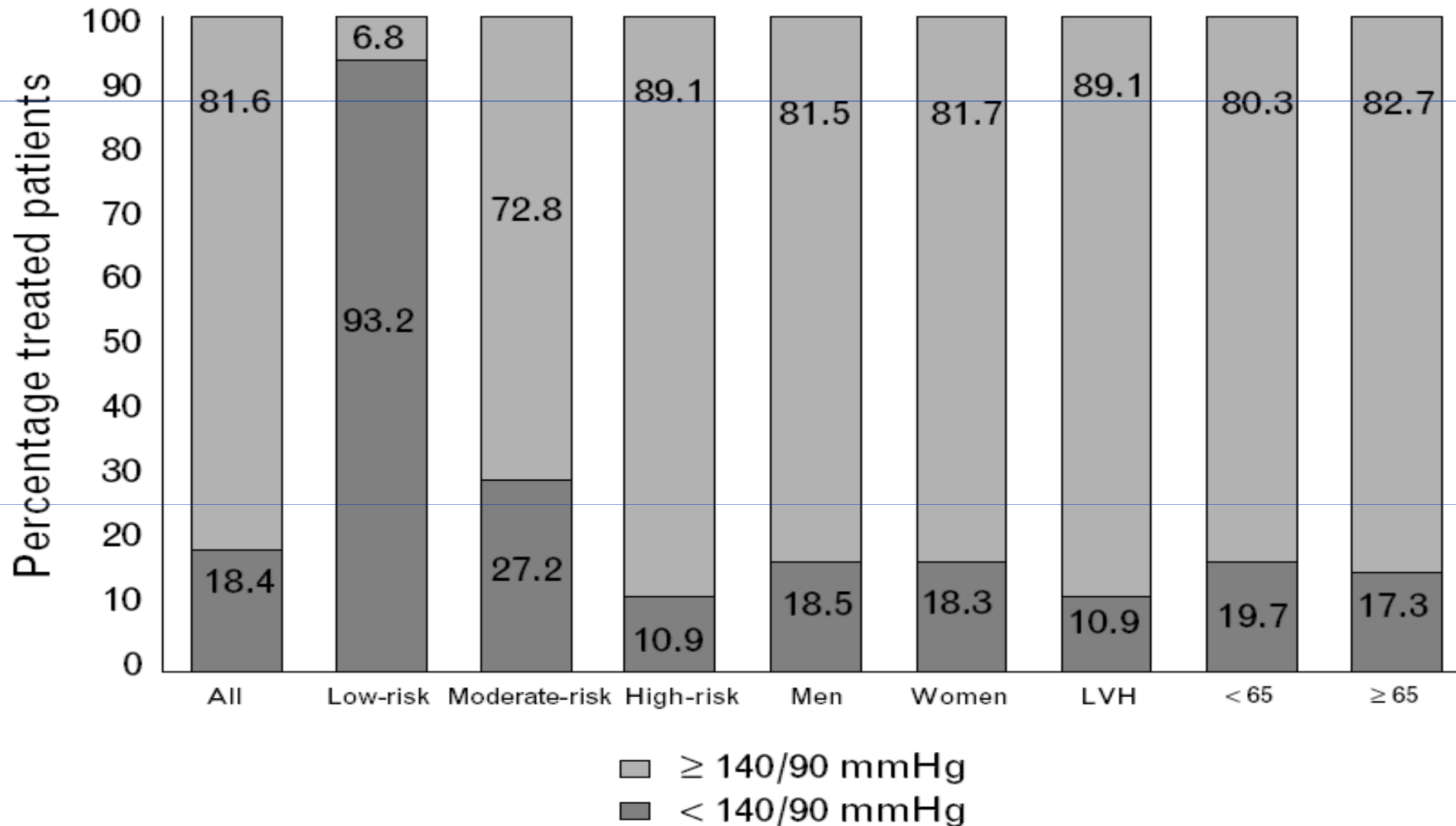


# Global cardiovascular risk stratification according to 2003 ESH/ESC guidelines in Italian hypertensive patients included in population and clinical surveys



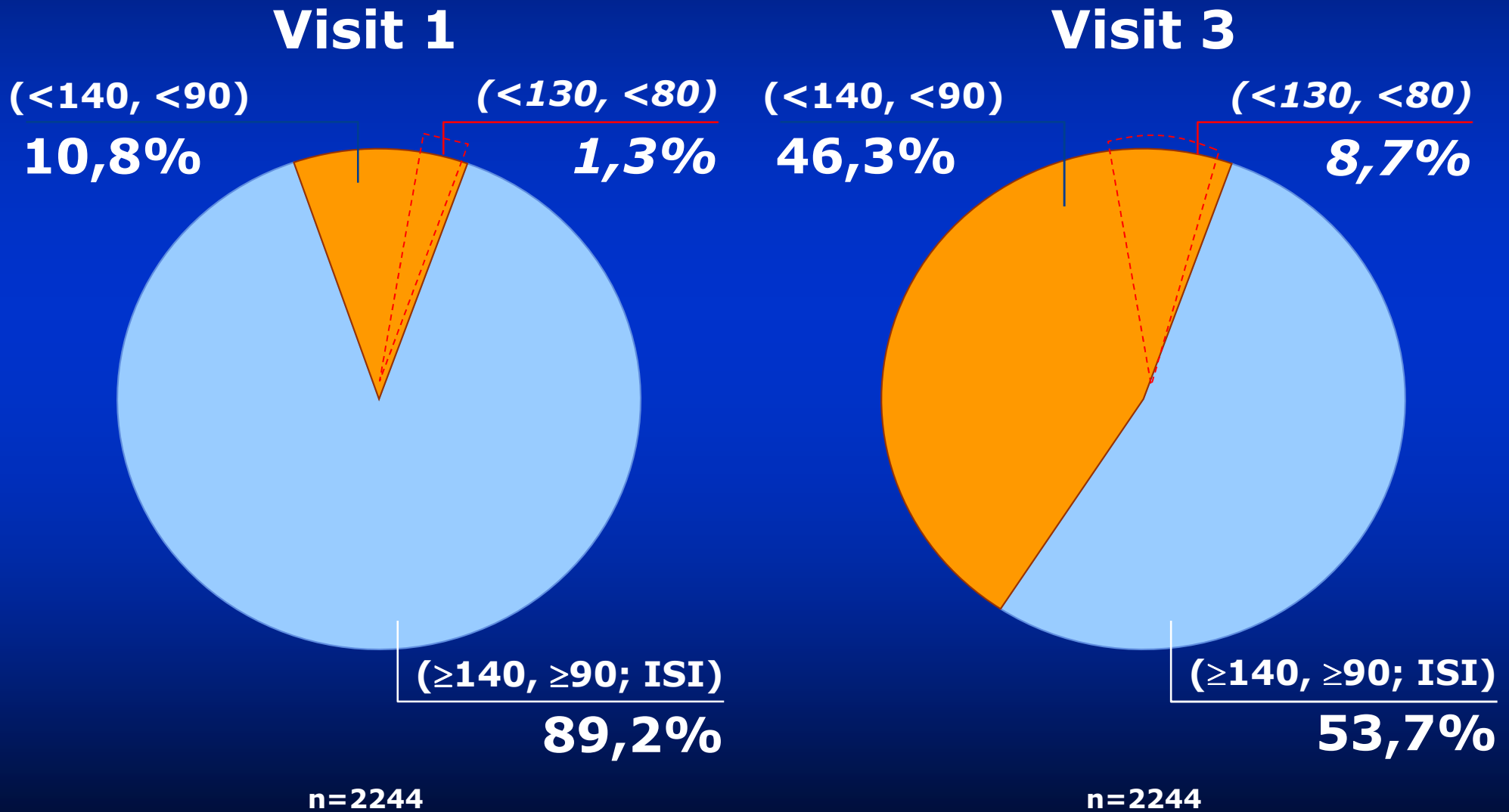
# FORLIFE

## Percentage of patients with controlled (< 140/90 mmHg) and uncontrolled BP



# FORLIFE

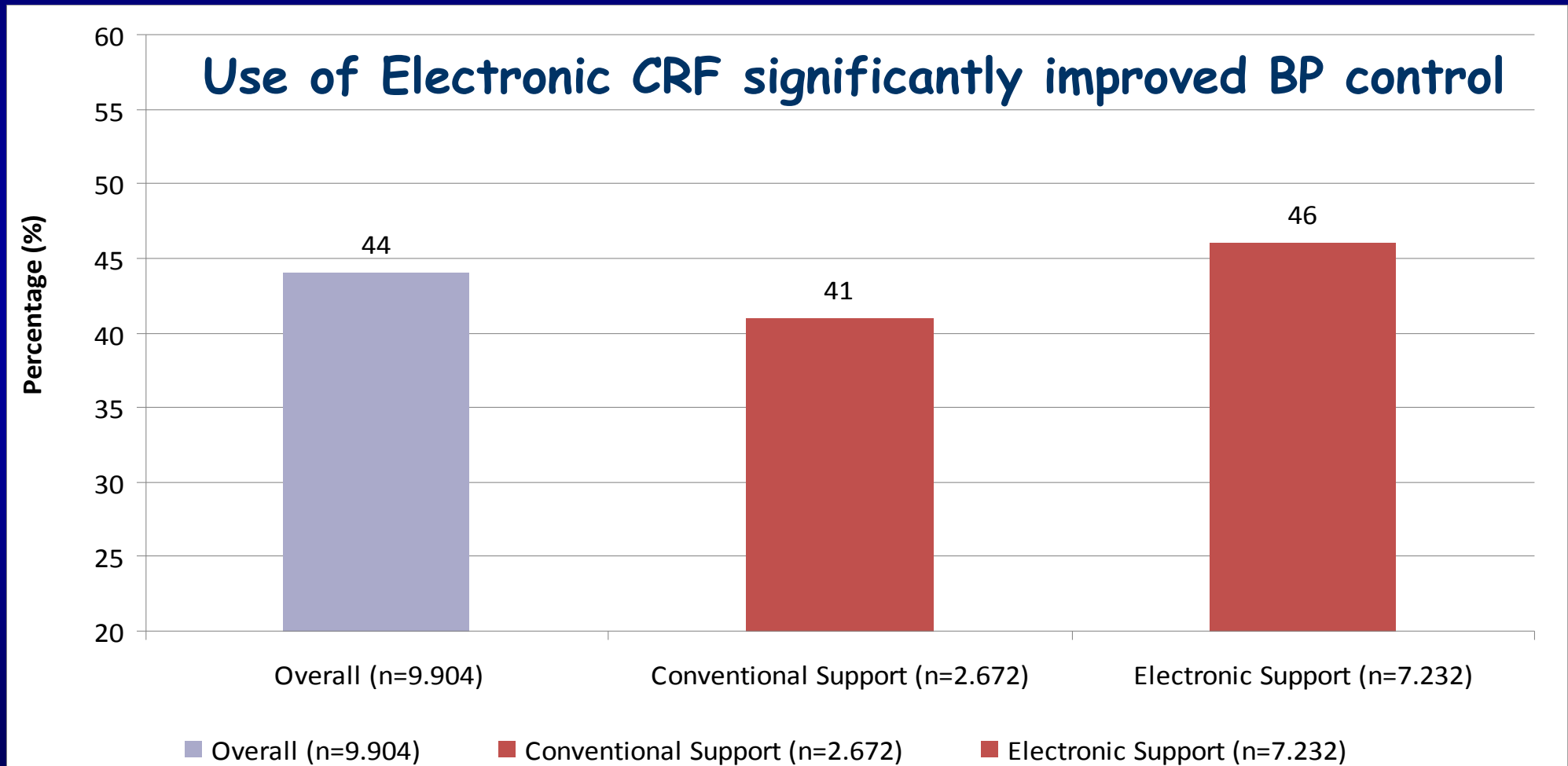
## Comparison between pressure values at visits 1 and 3 in patients with diabetes



# EFFECTUS Study

Percentage of patients achieving recommended BP targets (<140/90 mmHg) according to the age of referring physicians

N=6.820



\*p<0.001 vs conventional support

# Studio REACT

## REassessment of Anti-hypertensive Chronic Therapy

Valutare i valori pressori, il profilo di rischio, l'entità del danno d'organo e la qualità di vita in pazienti ipertesi, per stabilire l'efficacia e la tollerabilità della terapia



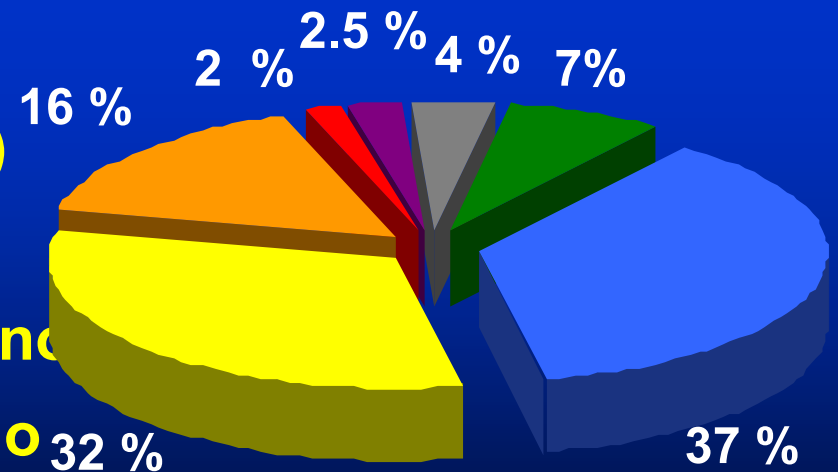
- 1482 pazienti in 131 centri

(cardiologi, internisti, nefrologi e diabetologi)

- età  $\geq$  18 anni

ipertensione arteriosa essenziale nota ( $\geq$  1 anno)

Regime terapeutico stabile da almeno 1 anno



# Studio REACT

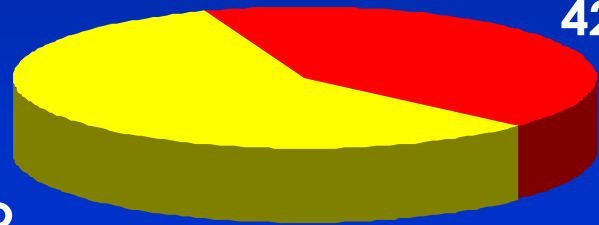
## REassessment of Anti-hypertensive Chronic Therapy

Ritiene Opportuno Modificare la  
Terapia Anti-HTN in Atto?

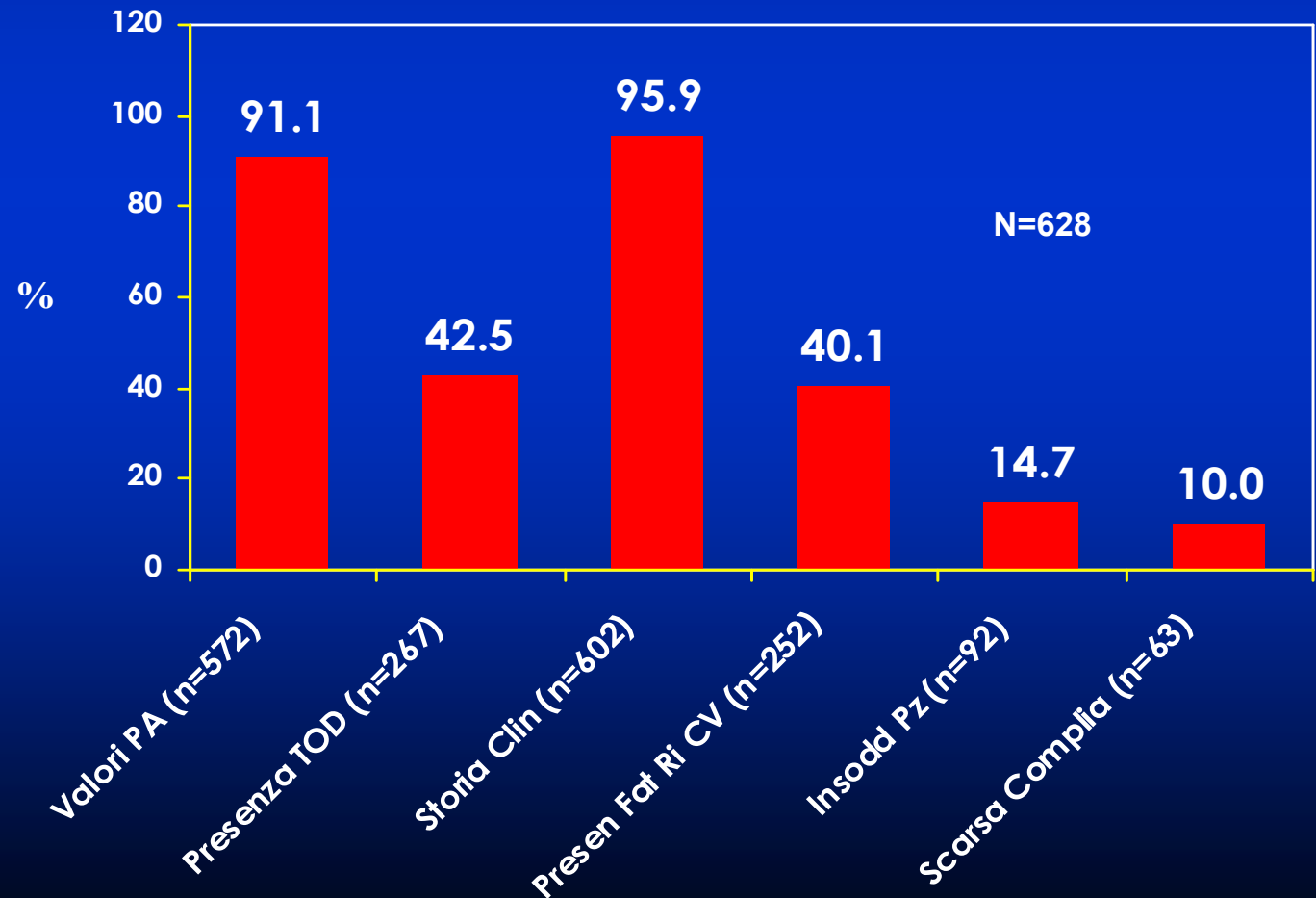
N=1482

Si  
42.4%

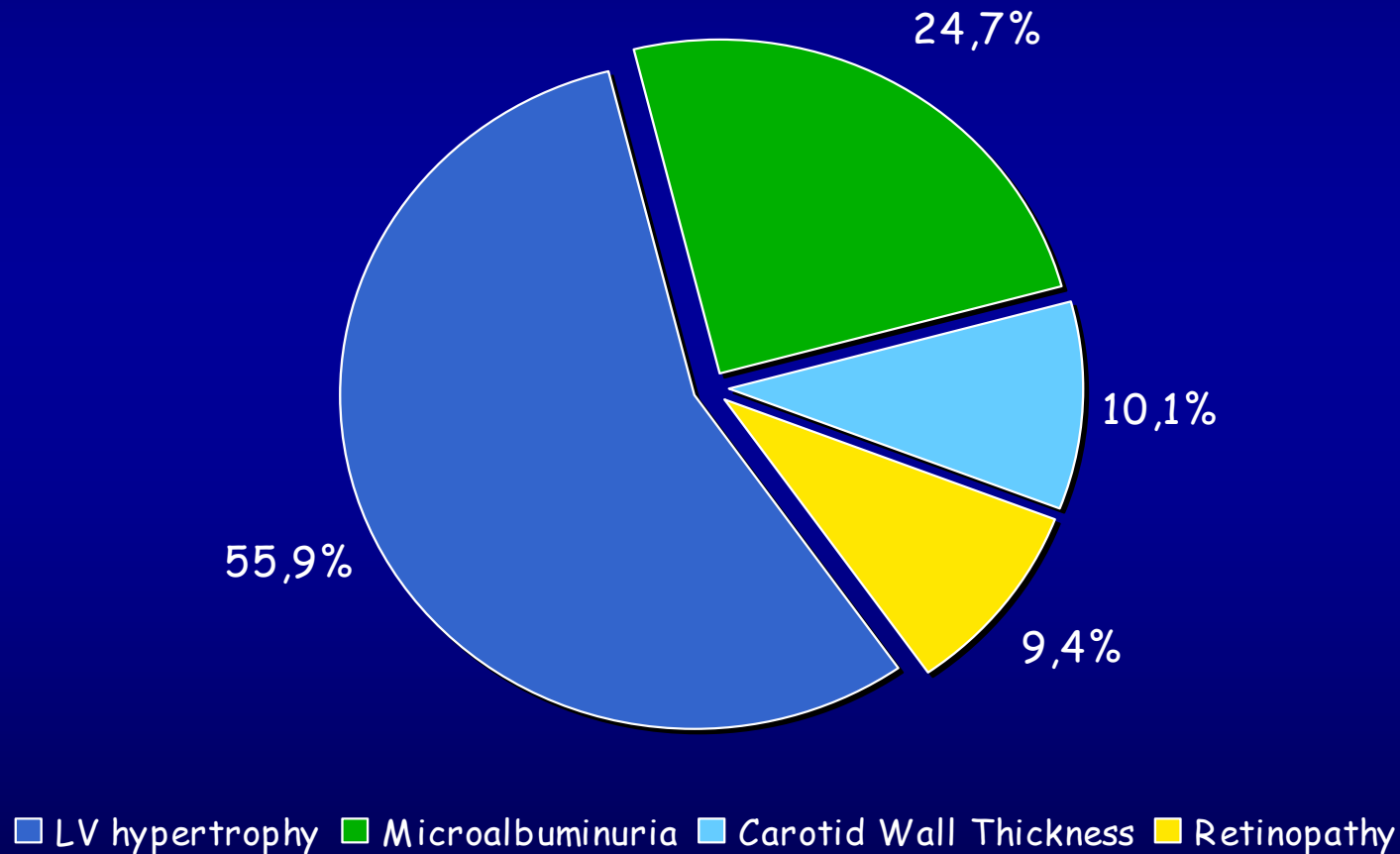
No  
57.6%



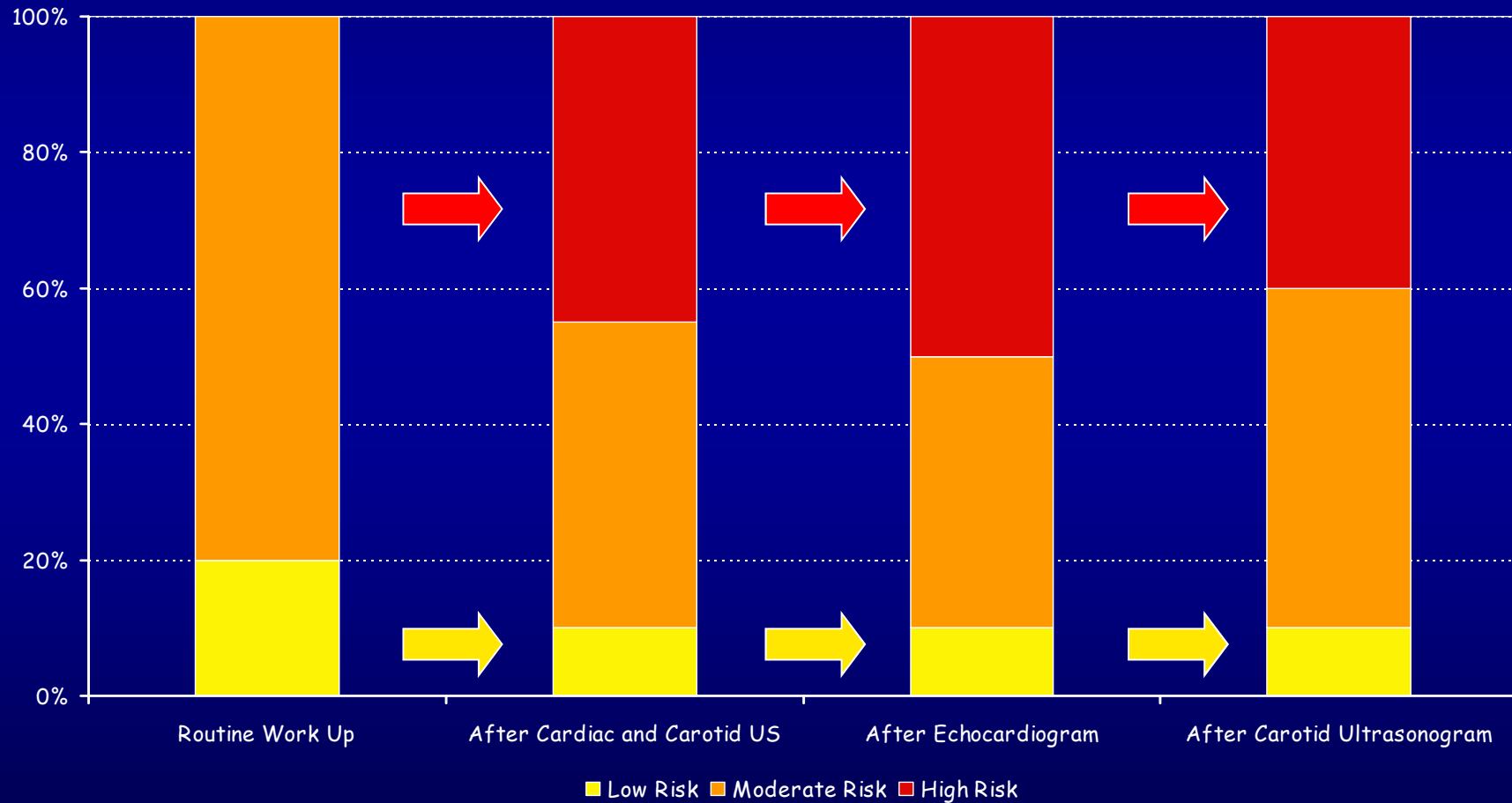
per quale motivo



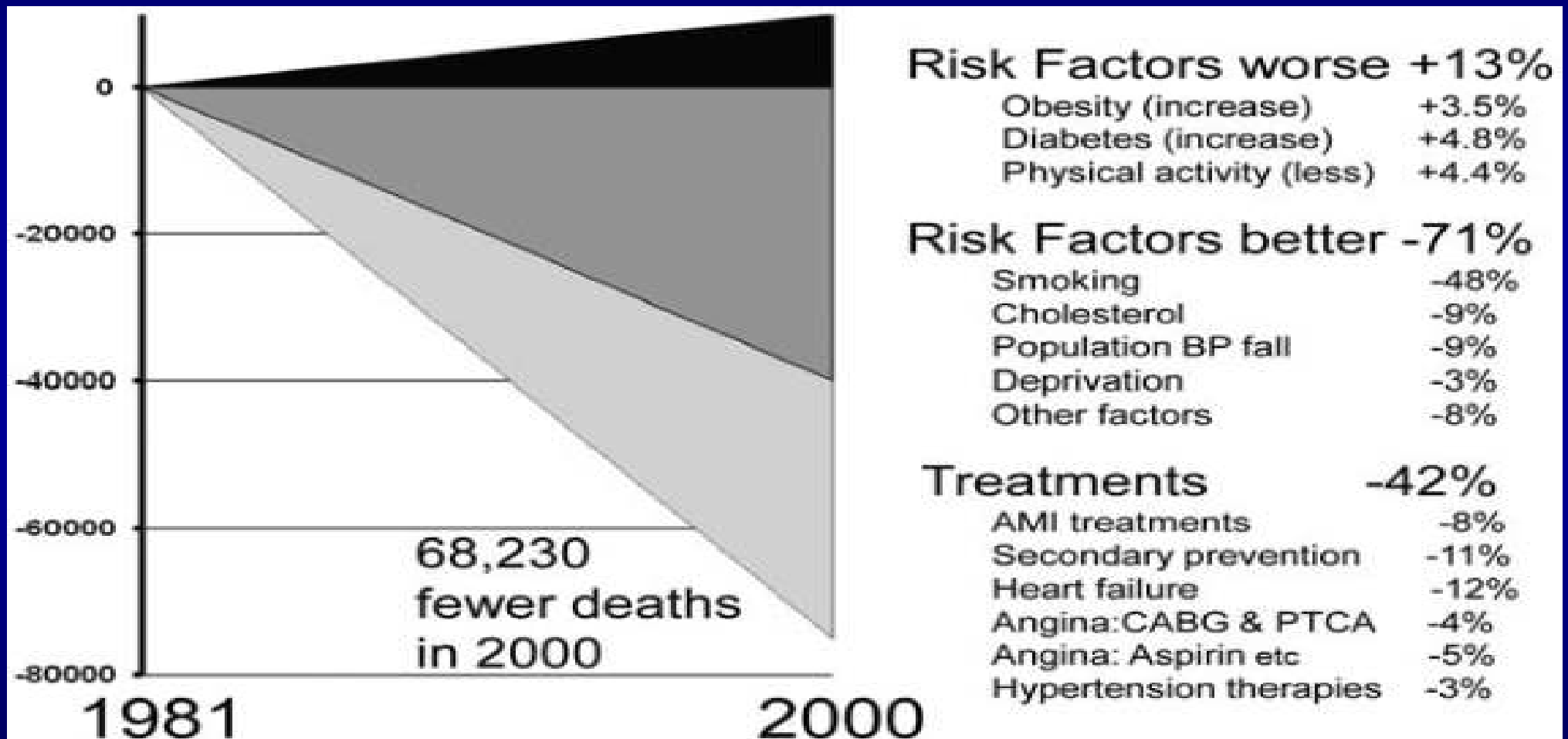
Which marker do you preferentially use to monitor the organ damage in your hypertensive patients?



Stratification of 1074 patients by global level of cardiovascular risk after the routine work-up and after assessment of target-organ damage by echocardiography and carotid ultrasonography (together or separately)

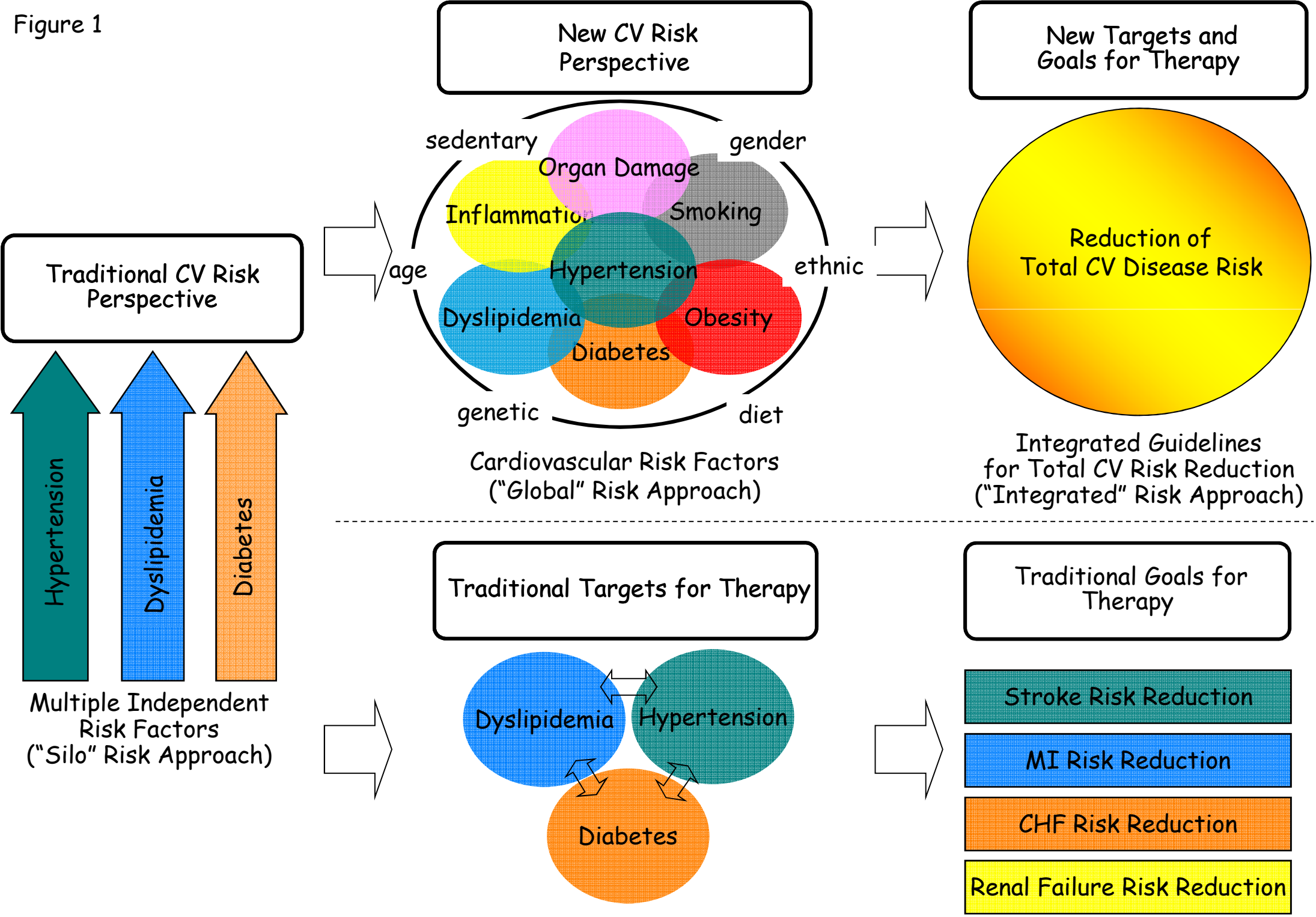


# Use of the IMPACT mortality model to explain the fall in CHD deaths in England & Wales 1981-2000



Bridging science and health policy in cardiovascular disease: focus on lipid management  
 A Report from a Session held during the 7th International Symposium on Multiple Risk  
 Factors in CV Diseases: Prevention and Intervention - Health Policy, in Venice, Italy, on  
 25 October, 2008

Figure 1



# Guidelines Target Modifiable Risk Factors

## Elements to Consider When Treating

### BEHAVIOR

Poor Diet  
Physical Inactivity  
Cigarette Smoking  
Excessive Alcohol

### NON-MODIFIABLE RISK FACTORS

Age  
Gender

Genetic Predisposition

### EXTERNAL FACTORS

Socio-economic, Cultural & Environmental Conditions and Modernisation, Mechanisation, Urbanisation, Globalisation

## Focus on Modifiable Risk Factors

Elevated LDL-C

High Blood Pressure

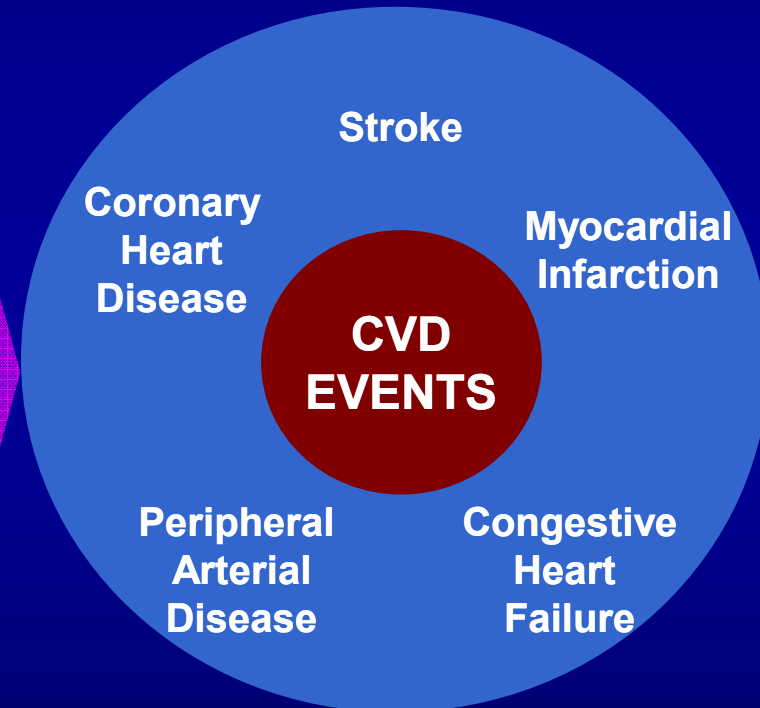
Reduced HDL-C

Diabetes

Obesity

Metabolic Syndrome

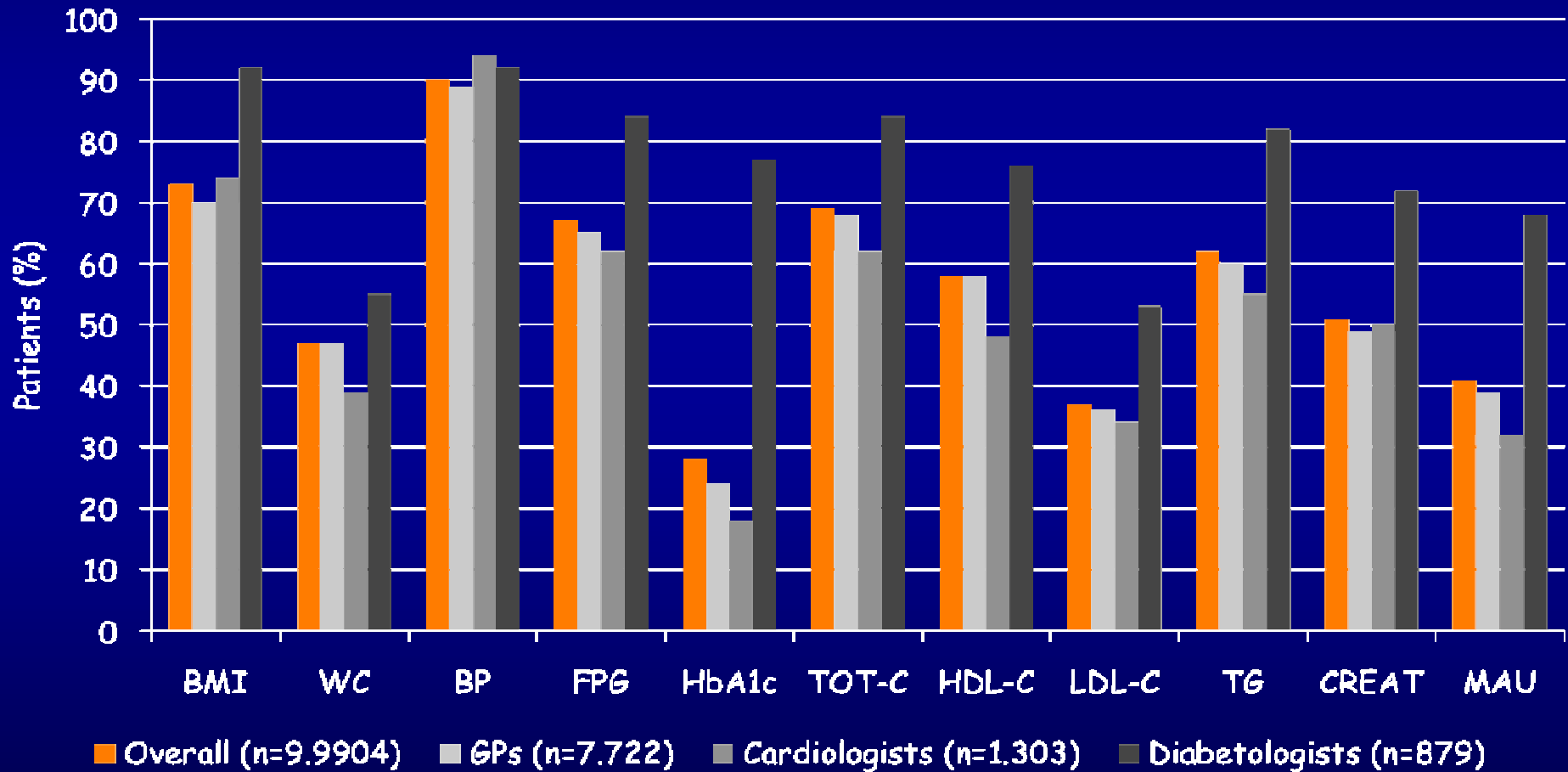
Smoking





Data Availability of Routine Tests for Global CV Risk Stratification according to different clinical settings.

The Evaluation of Final Feasible Effect of Control Training and Ultra Sensitisation (EFFECTUS) program.

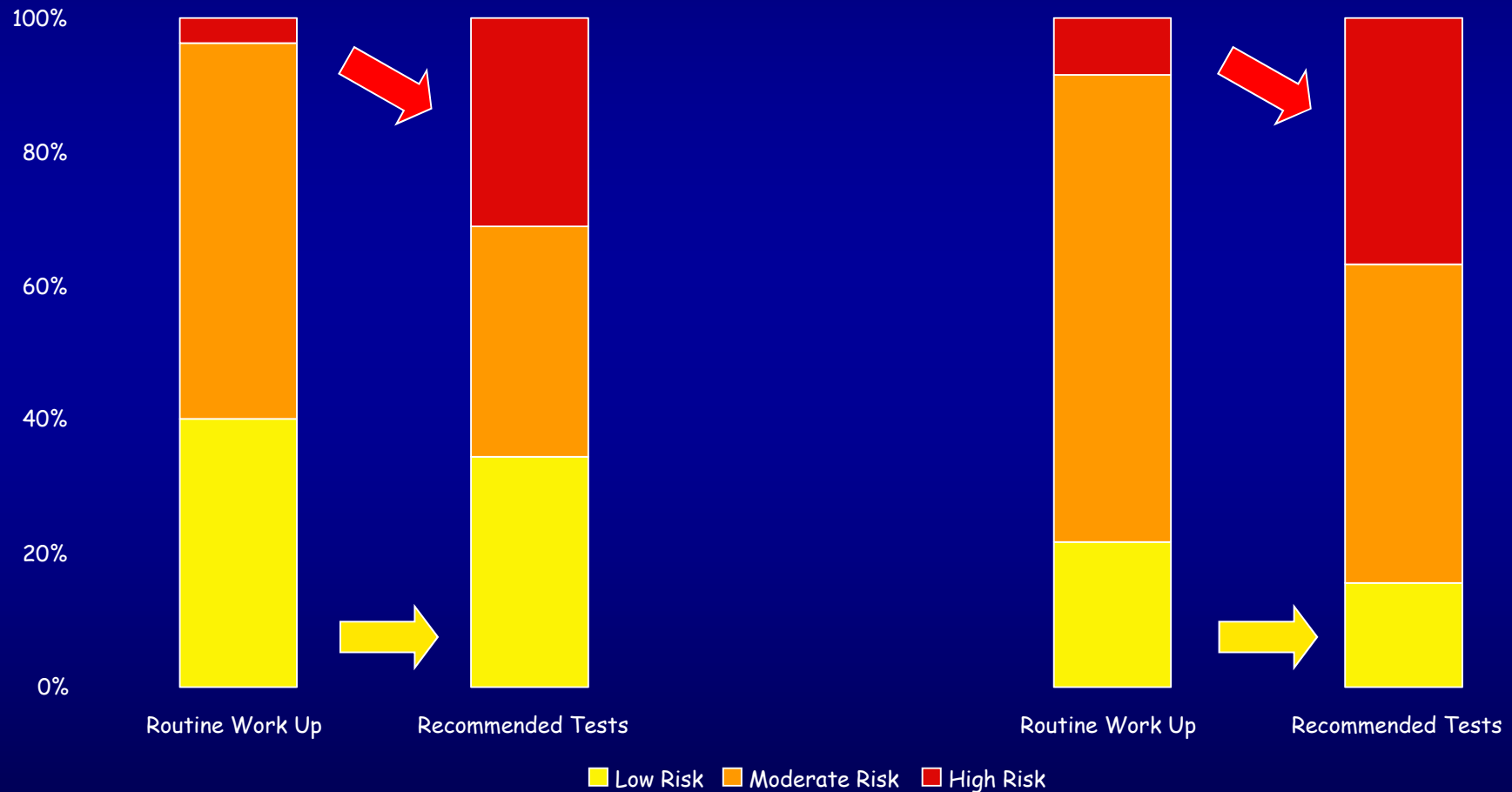


# Stratification of patients by absolute levels of cardiovascular risk performed according to 2003 ESH/ESC vs 1999 WHO/ISH Guidelines

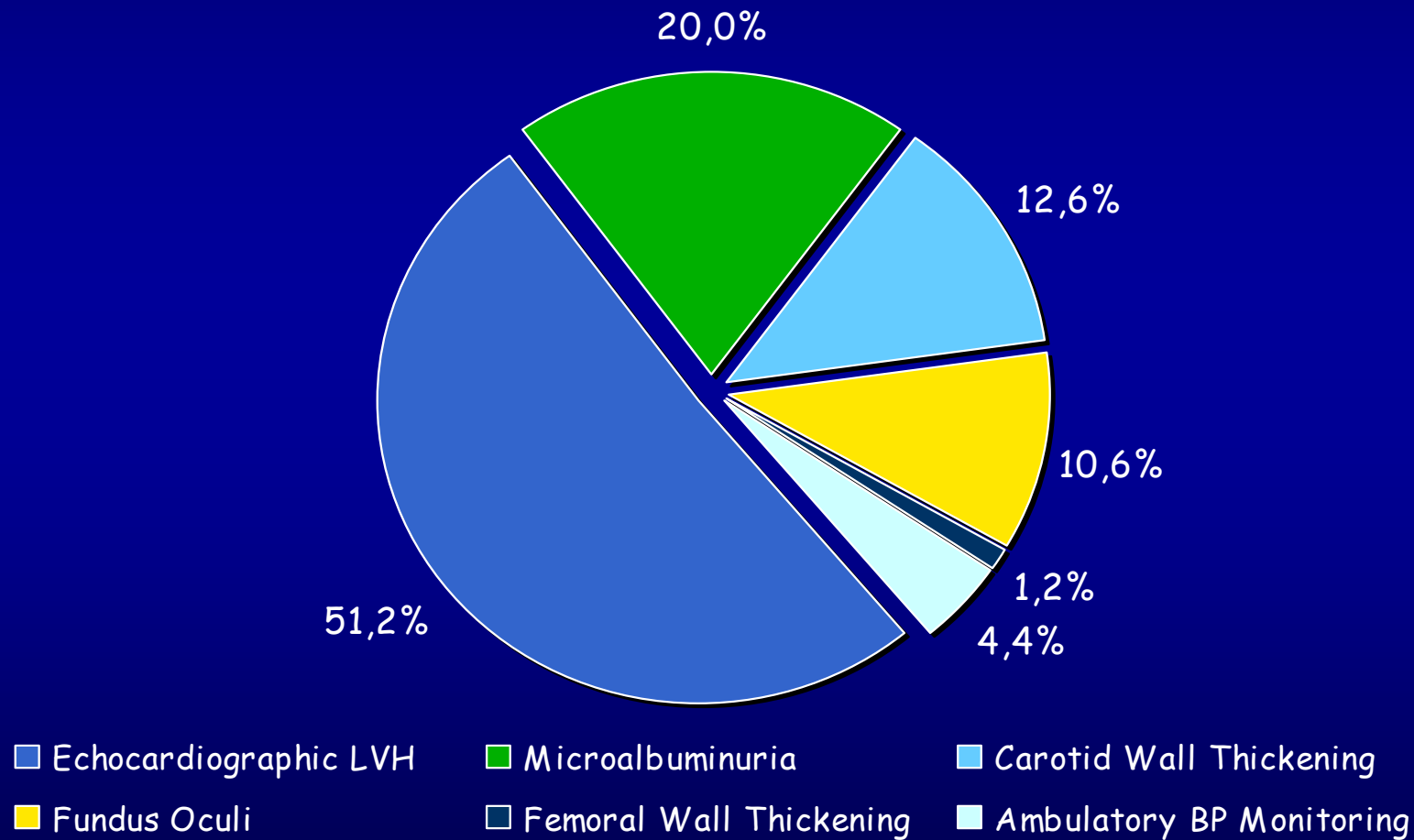
(based on routine examination and recommended tests)

## 1999 WHO/ISH Guidelines

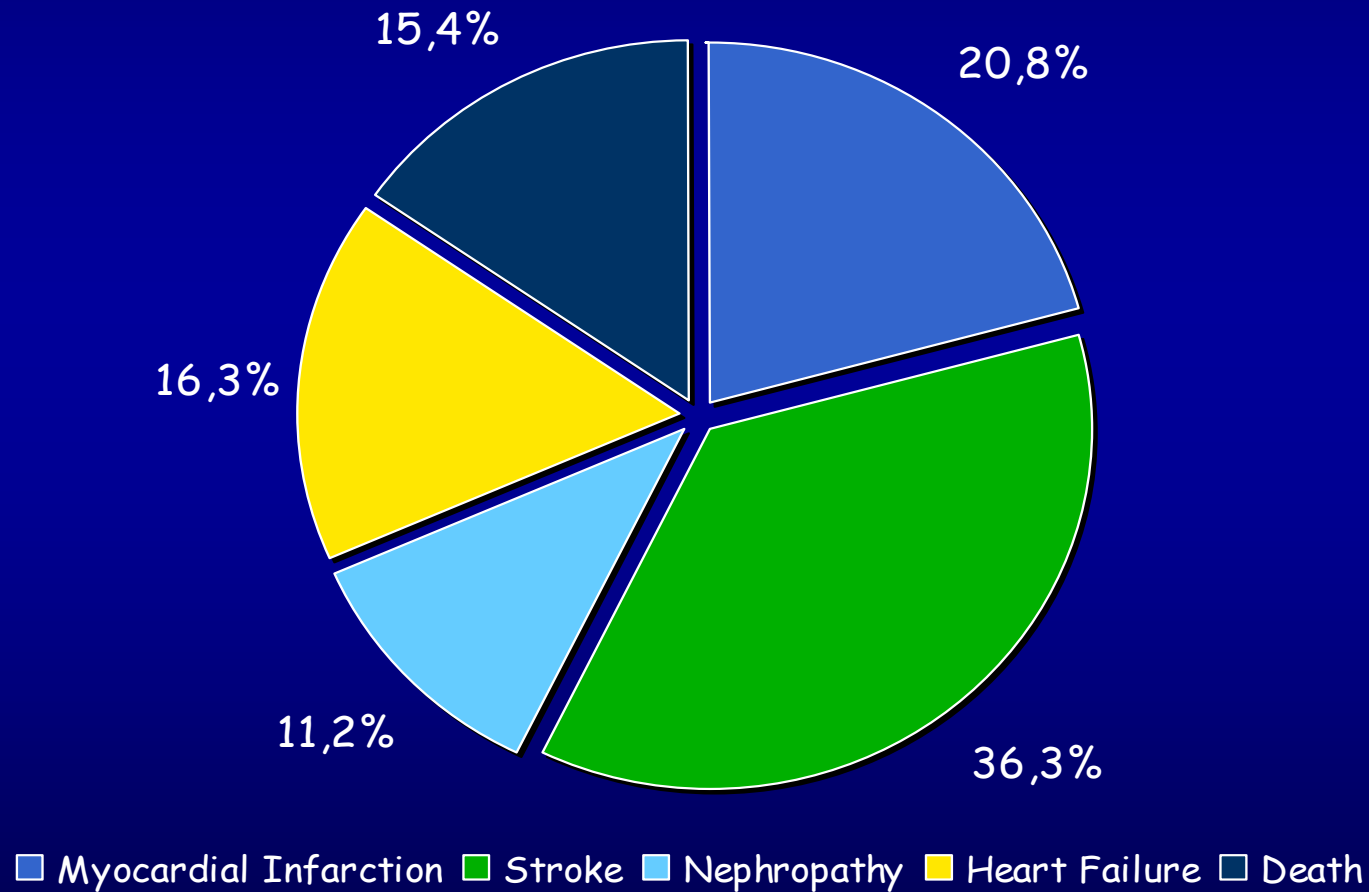
## 2003 ESH/ESC Guidelines



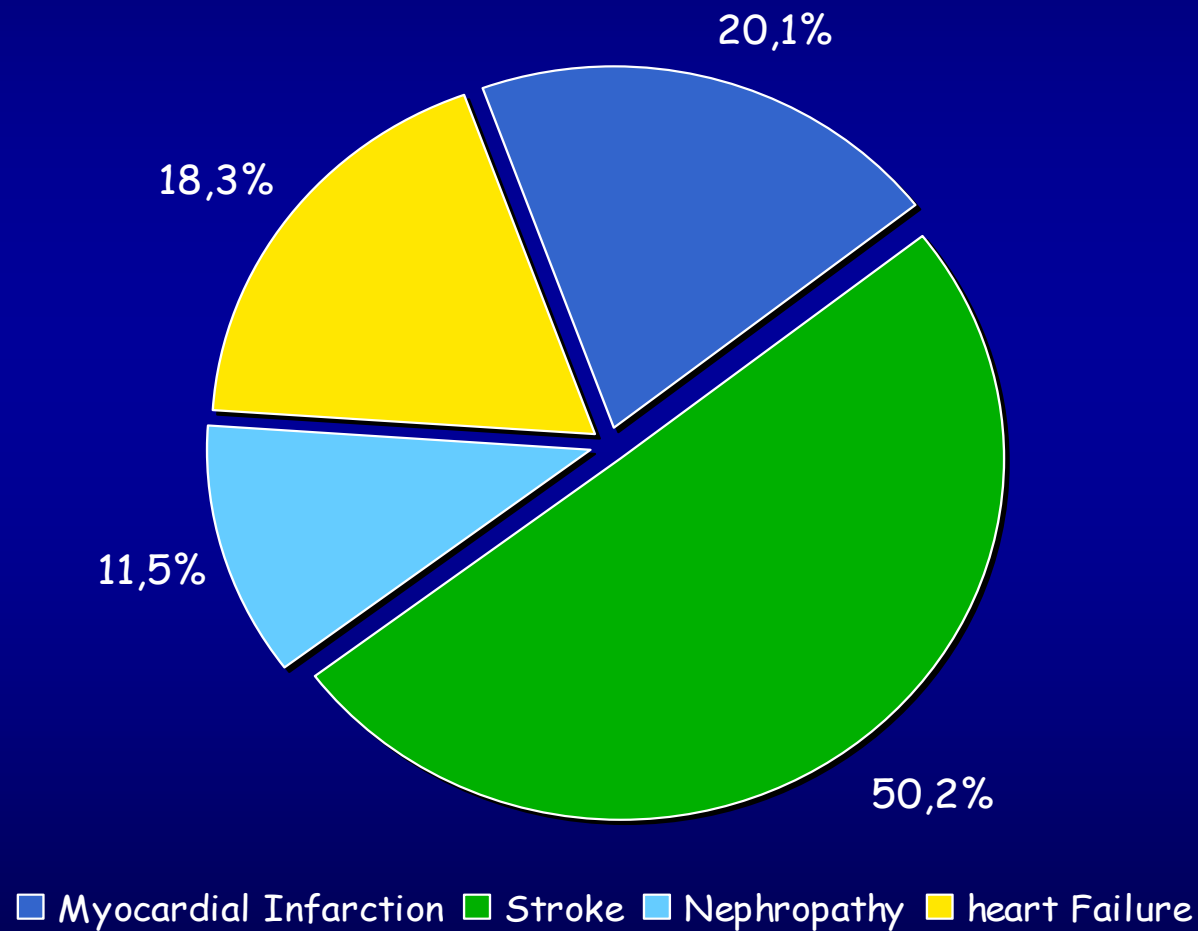
# Which exam do you preferentially use to evaluate the organ damage in your hypertensive patients?



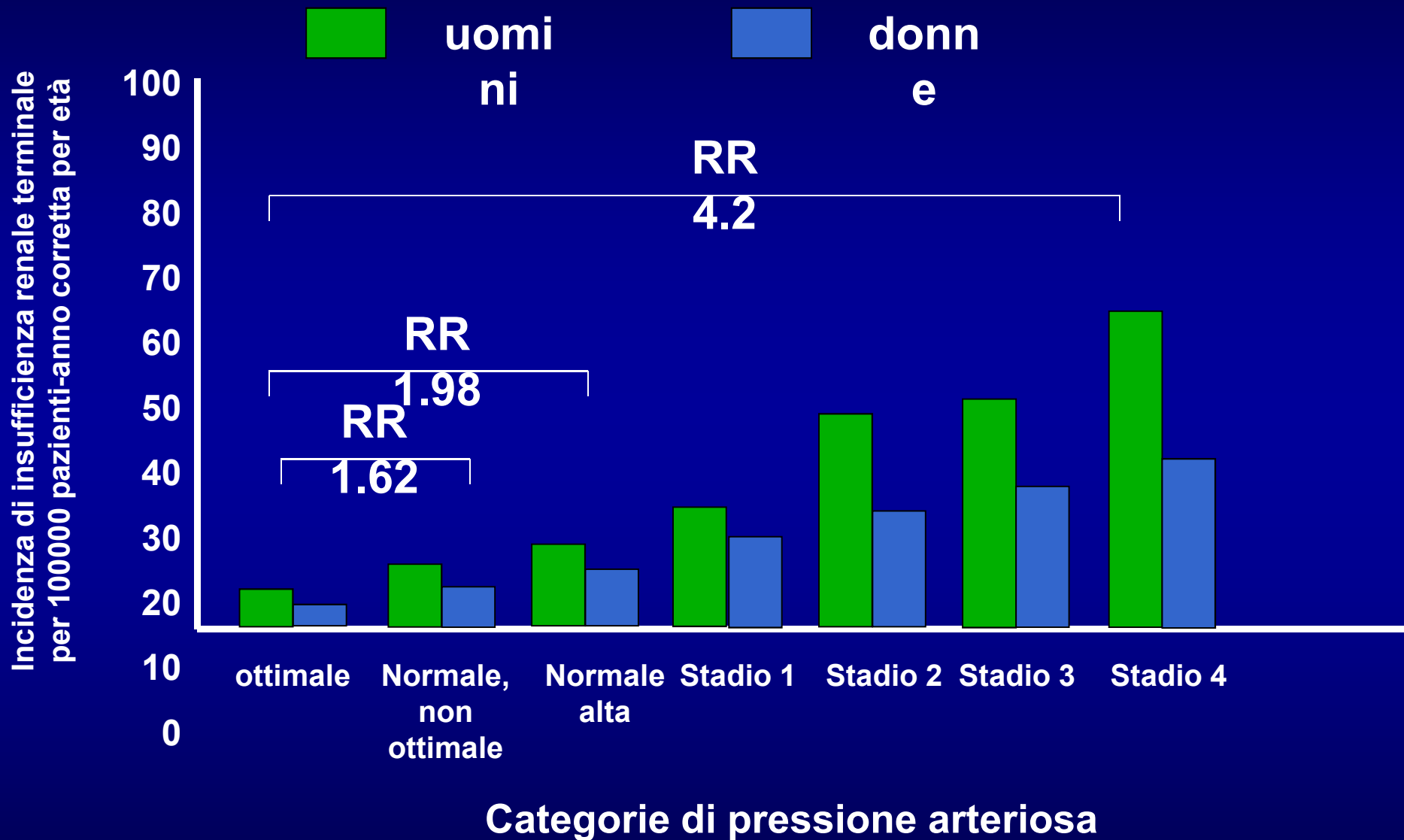
Which is the most important major CV event do you wish to prevent by BP lowering treatment?



Which is the most important major CV event do you think to be prevented by BP lowering treatment?



Elevati valori pressori costituiscono un fattore di rischio indipendente per lo sviluppo di insufficienza renale terminale

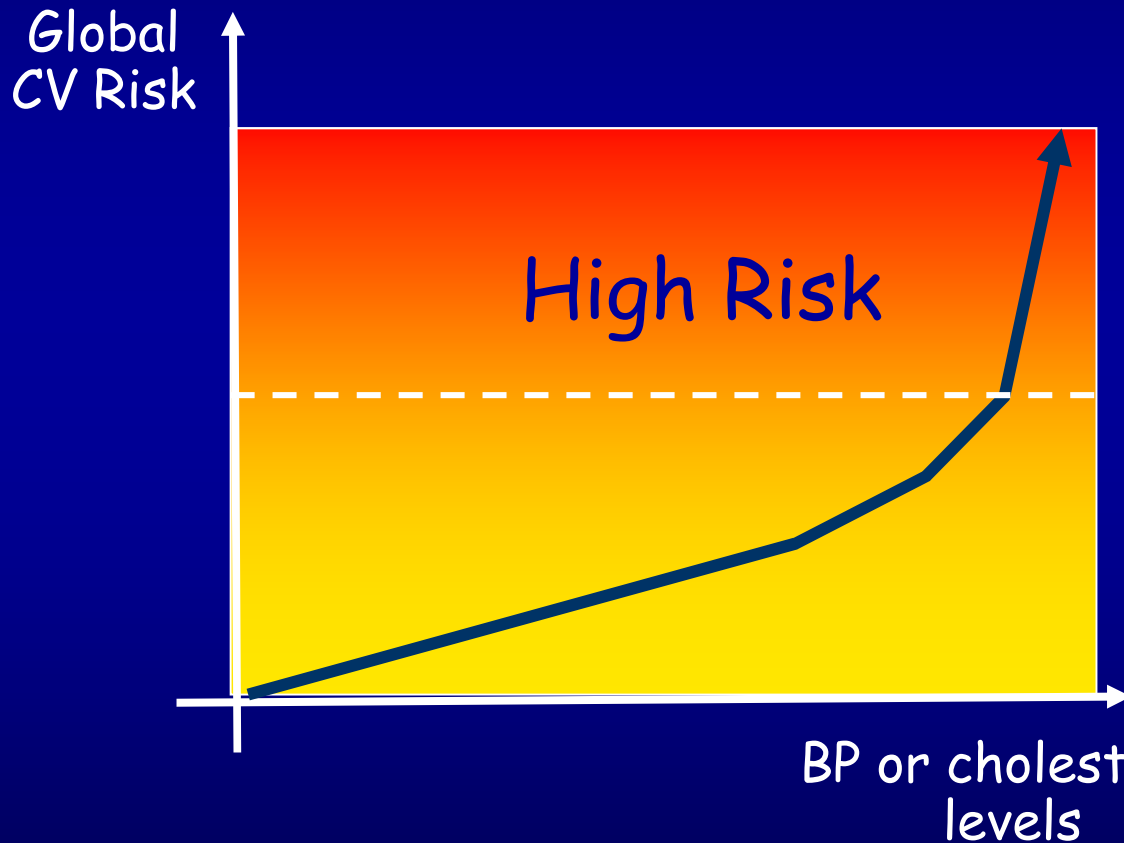


n= 316675, GFR >60 ml/min ed esame urine negativo

# Multifactorial Intervention in the "real

world"

Reduction of single or multiple Risk Factors generates a benefit proportional to the level of Risk

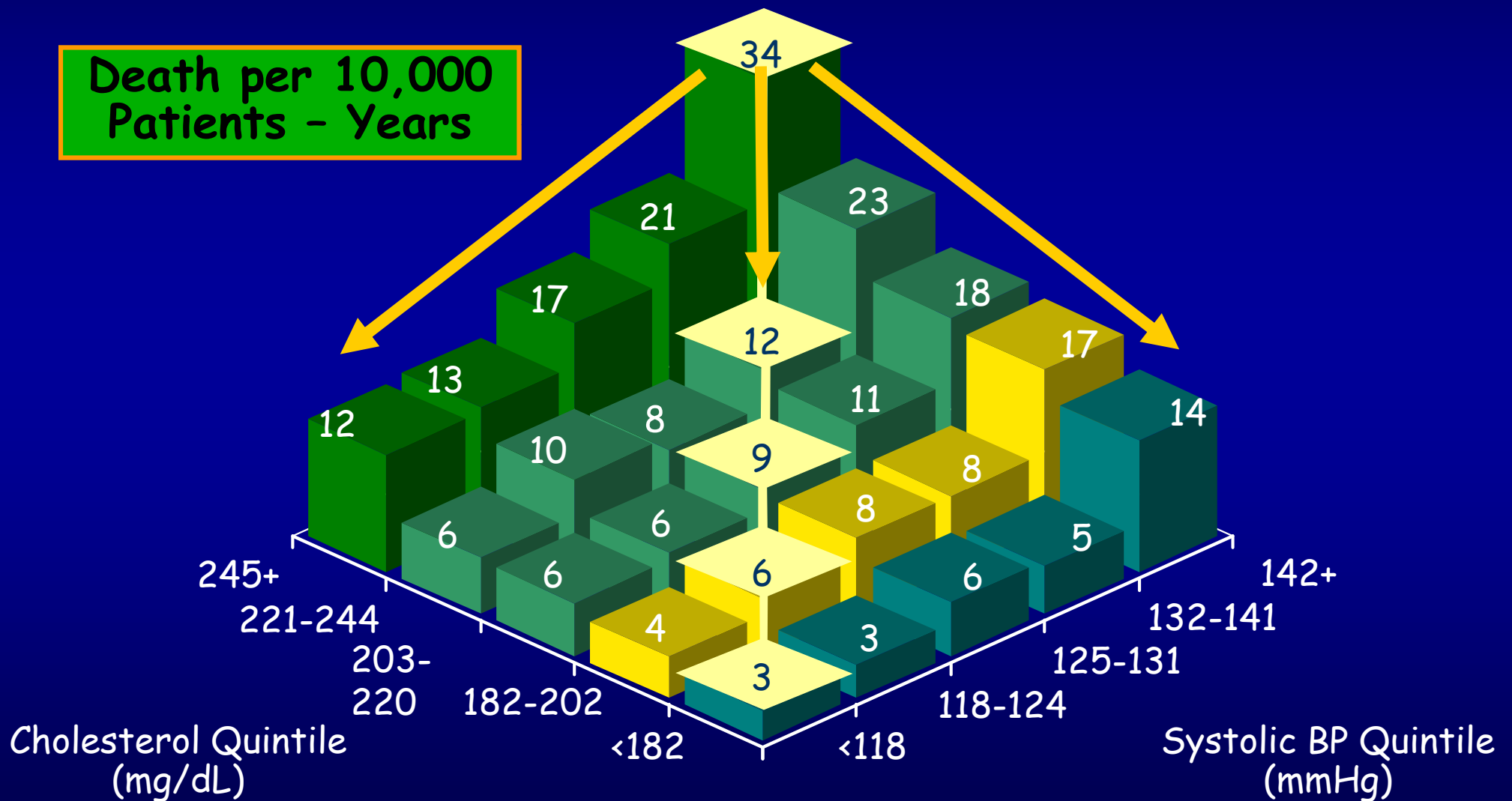


- Small changes in blood pressure or cholesterol levels may have a multiplicative effect in terms of CVD risk reduction, leading to a better cardiovascular

# A new strategy for defining therapeutic goals in hypertension: different options

Blood pressure (mmHg)					
Other risk factors, OD or Disease	Normal SBP 120–129 or DBP 80–84	High normal SBP 130–139 or DBP 85–89	Grade 1 HT SBP 140–159 or DBP 90–99	Grade 2 HT SBP 160–179 or DBP 100–109	Grade 3 HT SBP ≥180 or DBP ≥110
No other risk factors	Average risk	Average risk	Low added risk	Moderate added risk	High added risk
1–2 risk factors	Low added risk	Low added risk	Moderate added risk	Moderate added risk	Very high added risk
3 or more risk factors, MS, OD or Diabetes	Moderate added risk	High added risk	High added risk	High added risk	Very high added risk
Established CV or renal disease	Very high added risk	Very high added risk	Very high added risk	Very high added risk	Very high added risk

# Even Mild Elevations in Blood Pressure and Cholesterol Increases Total CVD Risk



# Participants and endpoints

- 600,000 participants, 10 year follow-up
  - 500,000 Asia
  - 100,000 Australia-New Zealand
- 7,000 cardiovascular deaths
  - 2 200 deaths from IHD
  - 2 800 deaths from stroke
  - 5 000 CVD deaths in Asia
  - 2 000 CVD deaths in Australasia (ANZ)
- 4,000 non-fatal events
  - 1 000 myocardial infarctions
  - 3 000 strokes

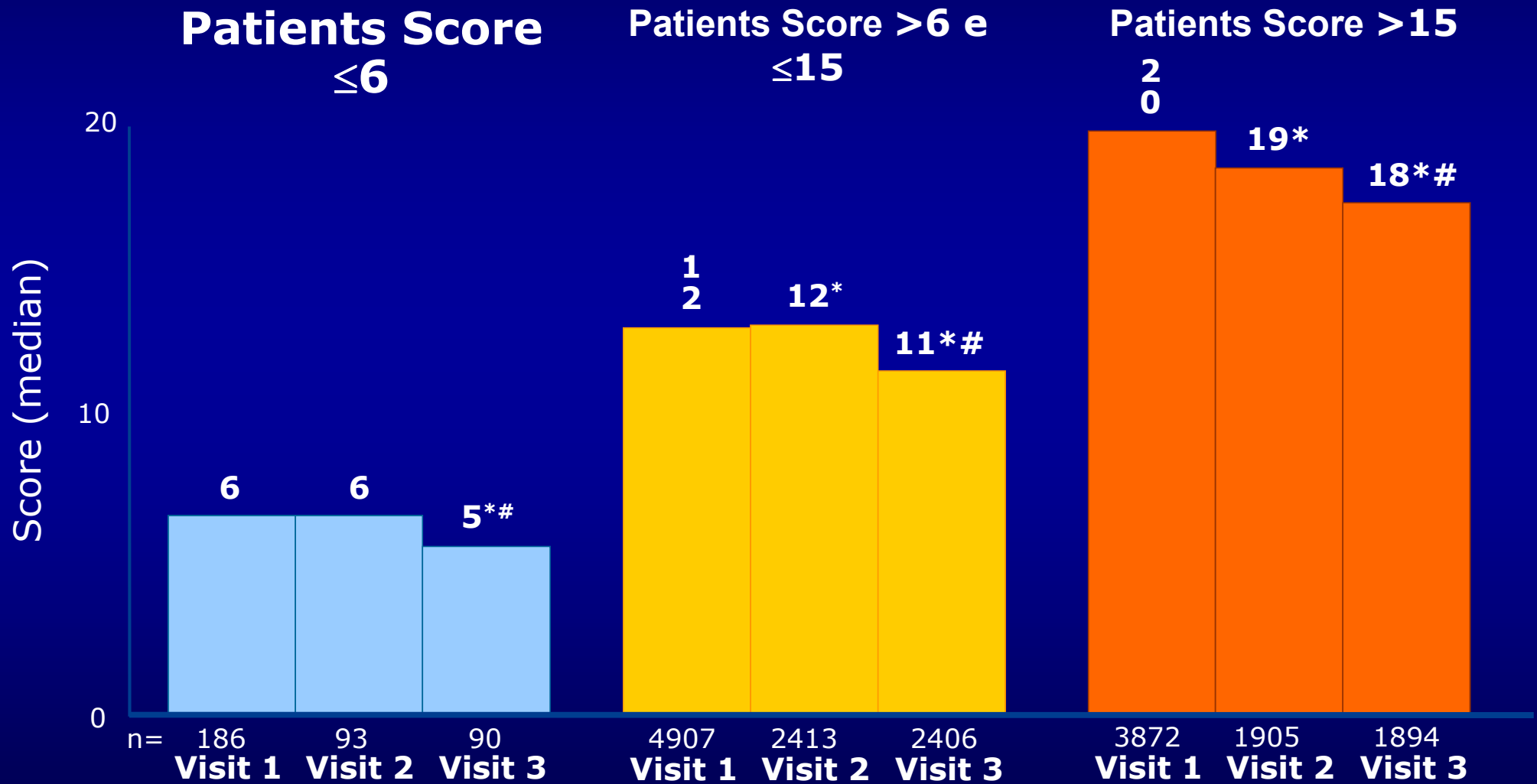


# Epidemiologically-predicted effects of reducing blood pressure and cholesterol

- 10 mmHg systolic (60-69 years)
  - ▶ 22% reduction in coronary disease
  - ▶ 38% reduction in stroke
- 1 mmol/l cholesterol
  - ▶ 32% reduction in coronary disease
  - ▶ 22% reduction in ischemic stroke
- Both (10 mmHg plus 1 mmol/l)
  - ▶ 47% reduction in coronary disease
  - ▶ 51% reduction in stroke



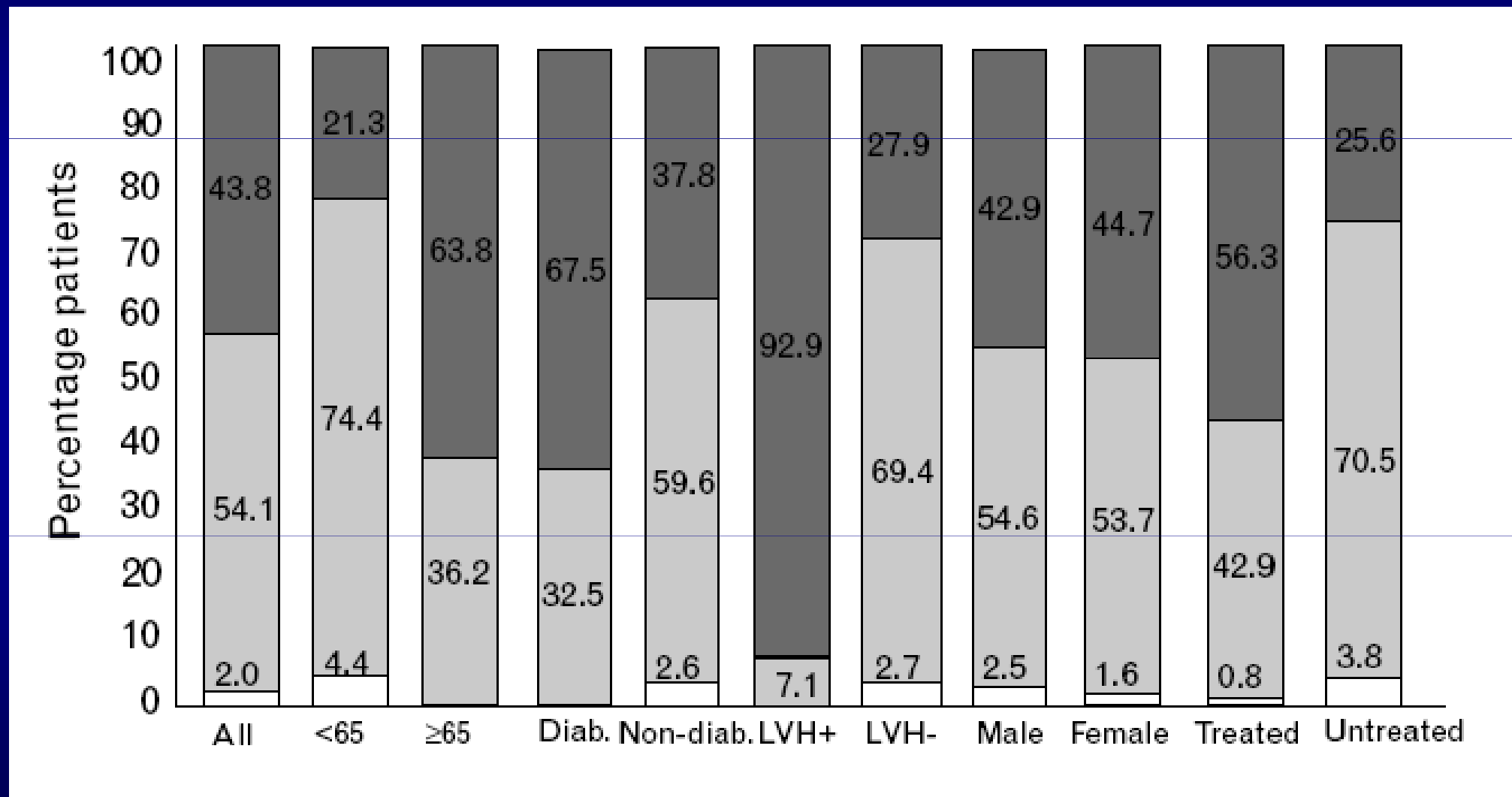
# Trends of Risk of Stroke according to initial risk in three visits over six months



\* p<0,0001 vs visit 1; # p<0,0001 vs visit 2

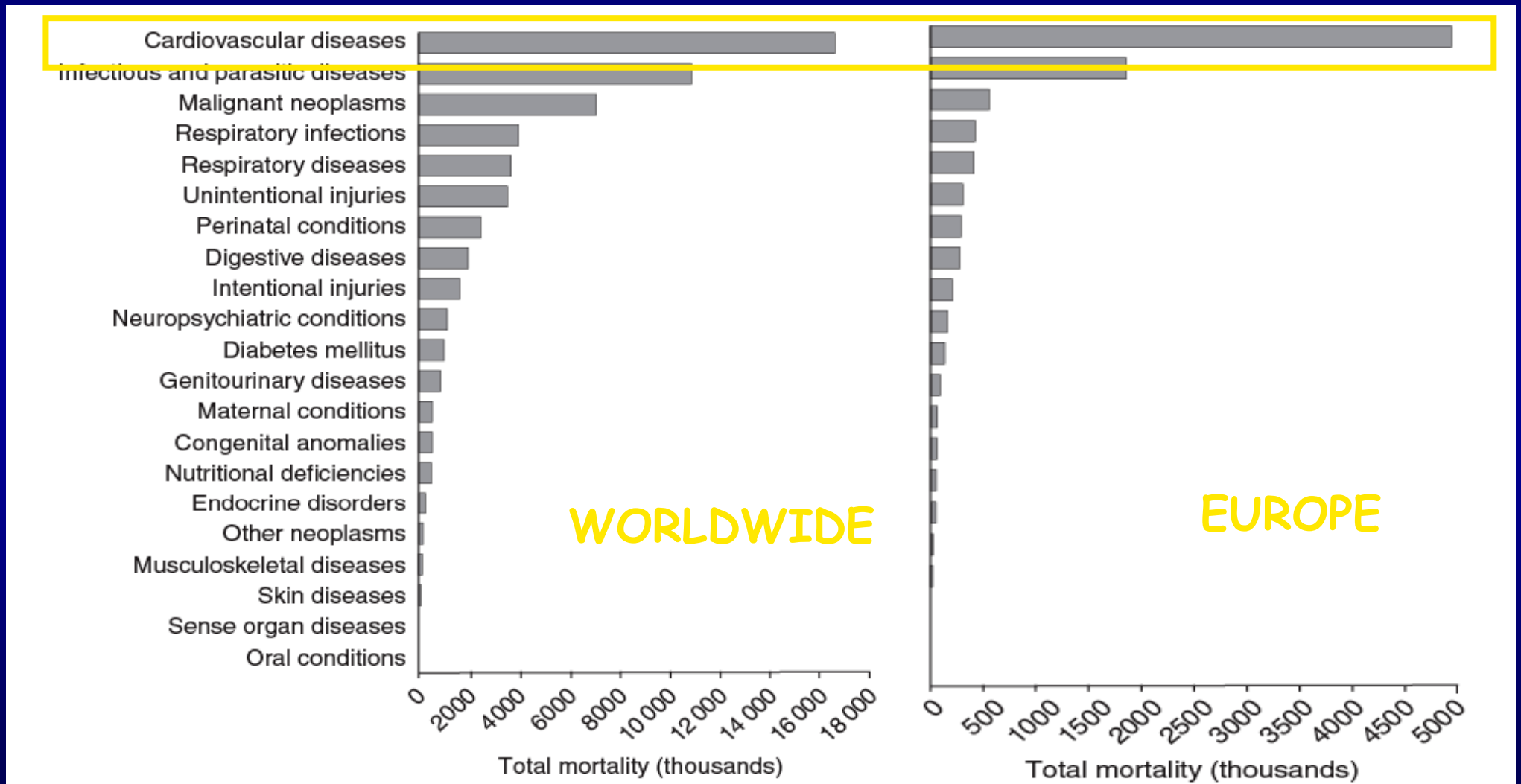
## ForLIFE Study

Low, moderate and high risk of stroke in the overall patient population and in various subgroups according to the stroke risk scoring algorithm.



# WHO - global burden of disease for the year 2002.

## Causes for total mortality for age and gender



# Baseline BP levels according in Italian hypertensive patients included in population and clinical surveys

