TURIN, 20TH—21ST NOVEMBER 2008

GREAT INNOVATIONS IN CARDIOLOGY

4TH JOINT MEETING WITH MAYO CLINIC

4TH TURIN CARDIOVASCULAR NURSING CONVENTION

SESSION III: **HOT SESSION**
NEW THERAPIES AND NEW TREATMENTS

G. Grassi (Milano)

Part I Cardiovascular high risk patient and blood pressure reduction: when and how to get it

Stratification of CV Risk in Four Categories

Other Risk Factors, OD or Disease	Blood Pressure (mmHg)				
	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
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SBP: systolic blood pressure; DBP: diastolic blood pressure; CV: cardiovascular; HT: hypertension. Low, moderate, high, very high risa refer to 10year risk of a CV fatal or non-fatal event. The term “added” indicates that in all categories risk is greater than average. OD: subclinical organ damage; MS: metabolic syndrome.

ESH-ESC Guidelines 2007

High / Very High Risk Patients

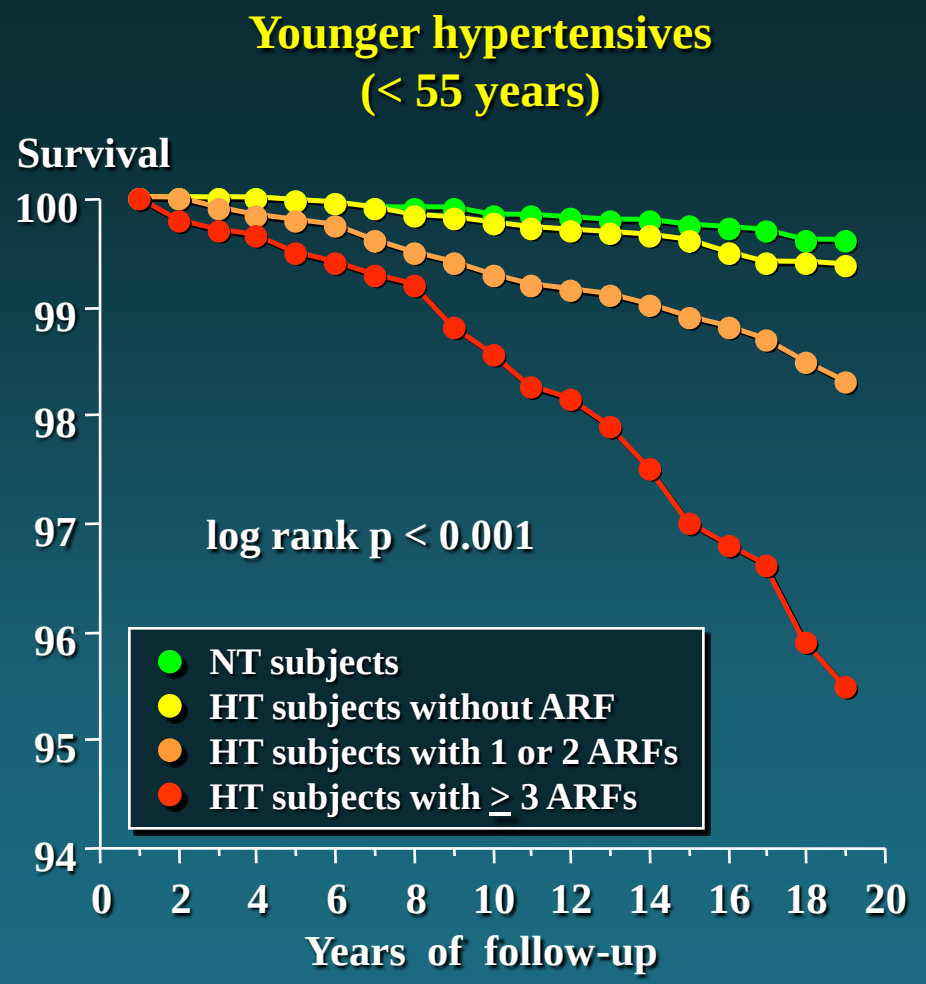
- BP ≥ 180/110 mmHg
- BP ≥ 130/ 85 mmHg if:
  - Risk factors ≥ 3
  - Diabetes
  - Associated CVD
  - TOD

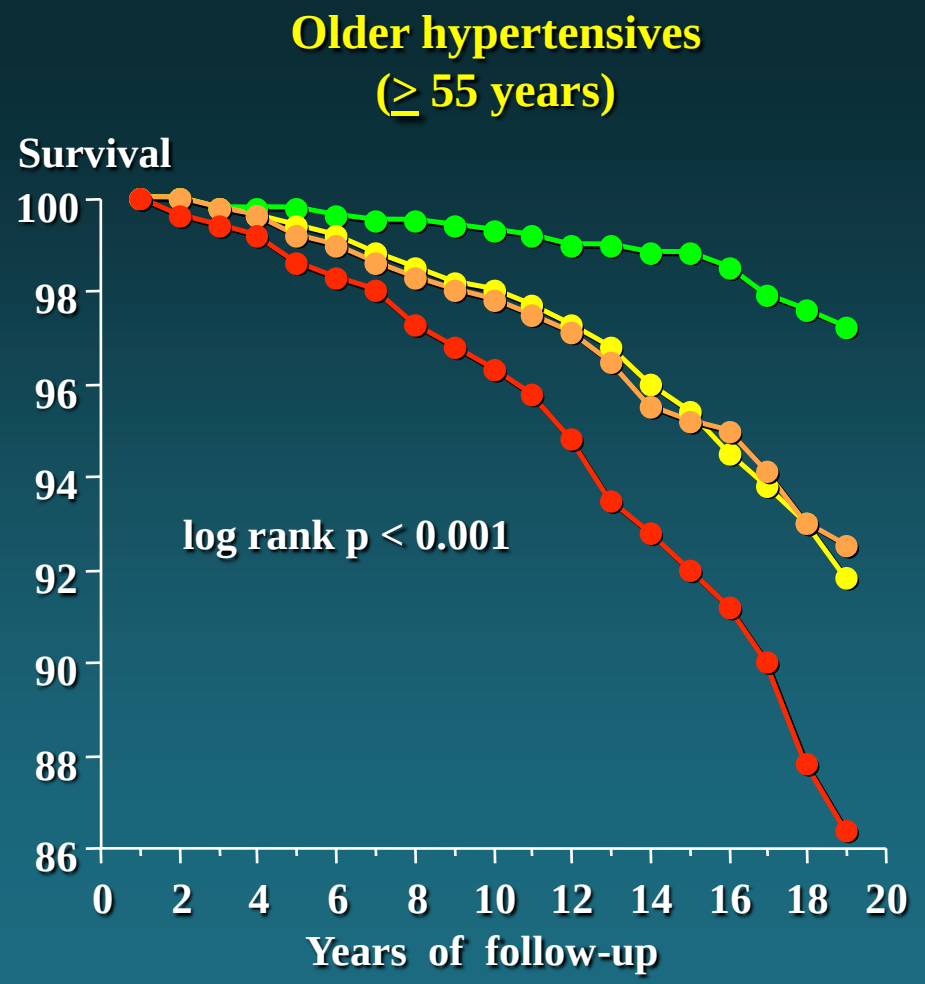
    ↓

    LVH
    CA thickening
    Microalbuminuria
    Mild renal damage → SCr > 1.3-1.5 mg/dl (M) / 1.2-1.4 mg/dl (F) (routine examination)

ESH-ESC Guidelines 2007

Survival Probability for CVD Mortality in Younger and Older Men according to the Presence of Hypertension and Associated Risk Factors



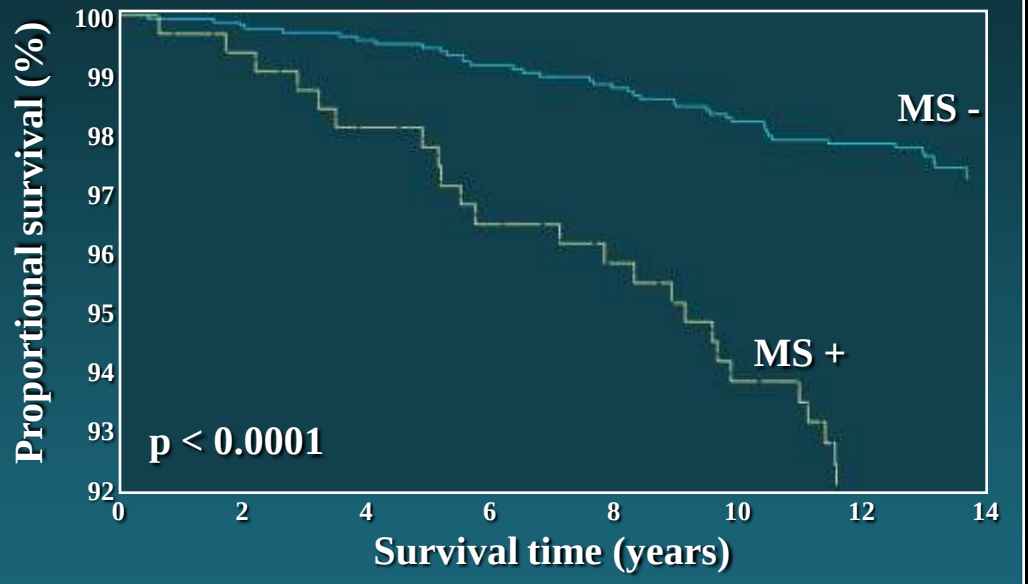


Thomas F et al., Hypertension 2001; 37: 1256-1261

Kaplan-Meier Survival Curves for CV Death and All Cause Death in Subjects Without and With Metabolic Syndrome

All cause death

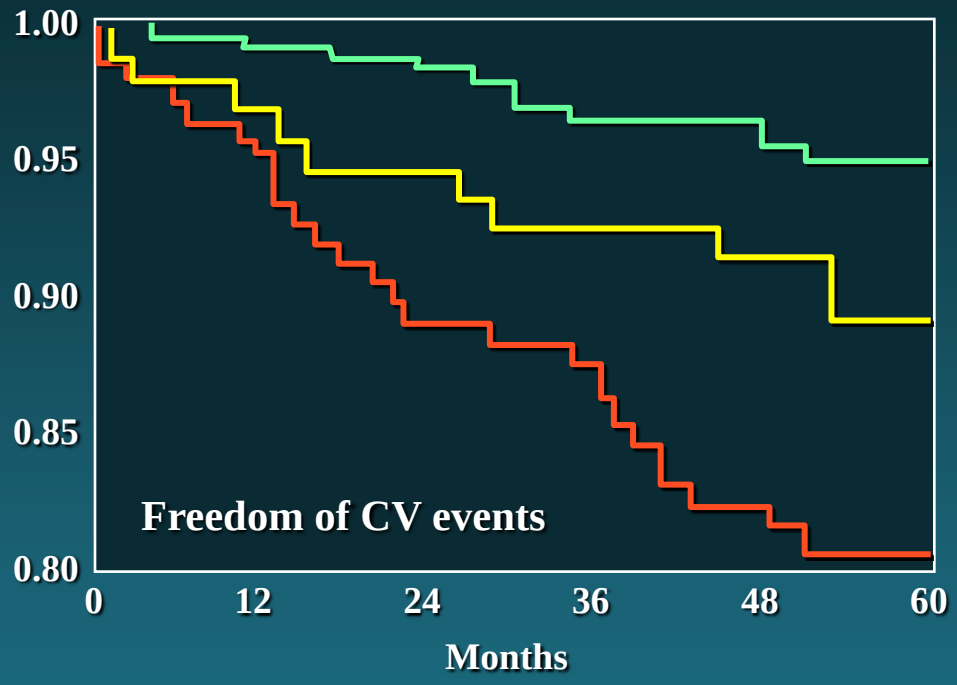
Cardiovascular death



11064 M

Mancia et al., Hypertension 2006; 49: 40-47

LIFE Substudy: Kaplan-Meier Plots on Accumulated Freedom of CV events according to Urine Albumin/Creatinine Ratio (UACR) and LV Mass



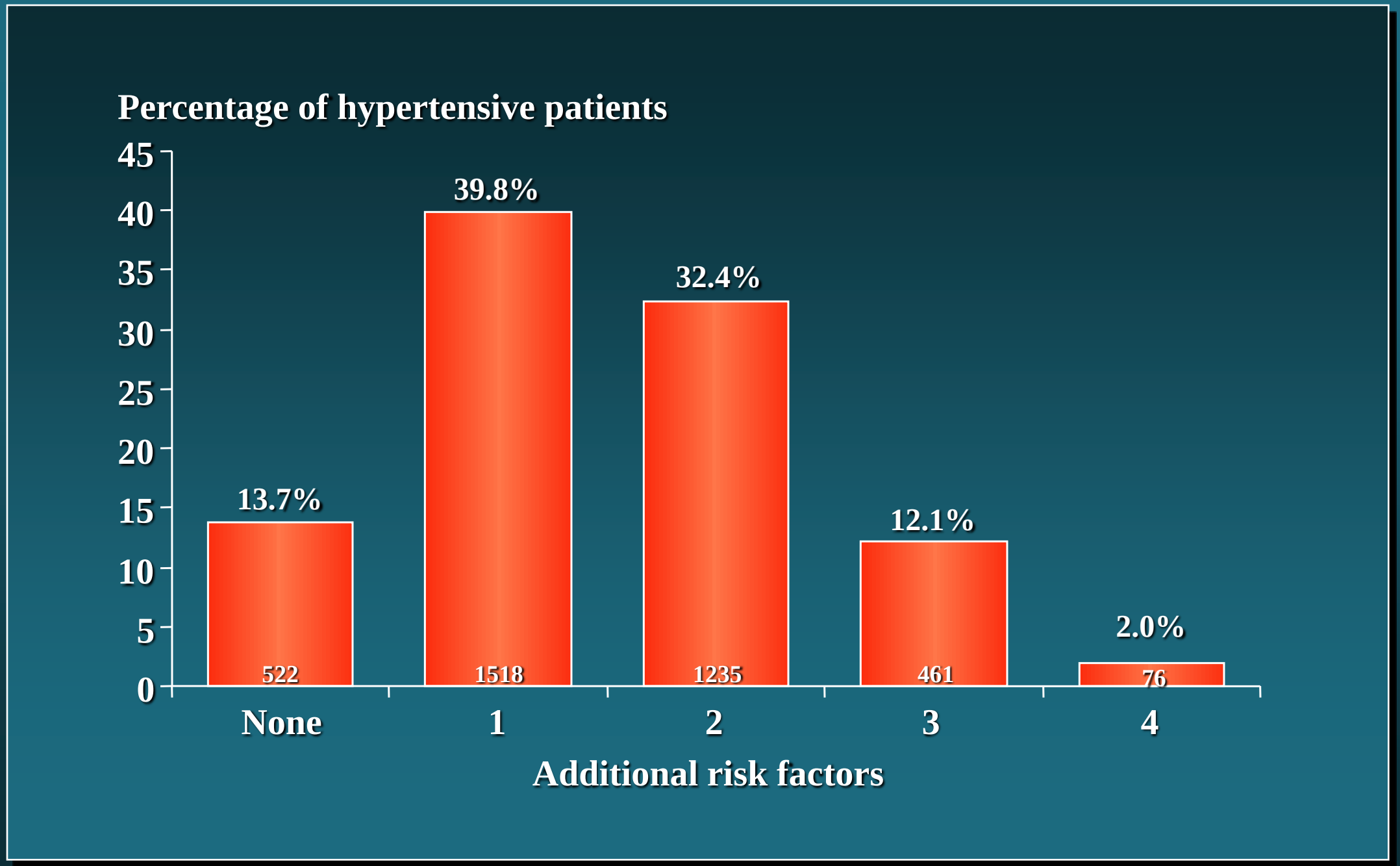
UACR < 1.406, LV mass < 194

UACR ≥ 1.406, LV mass < 194

UACR ≥ 1.406, LV mass ≥ 264

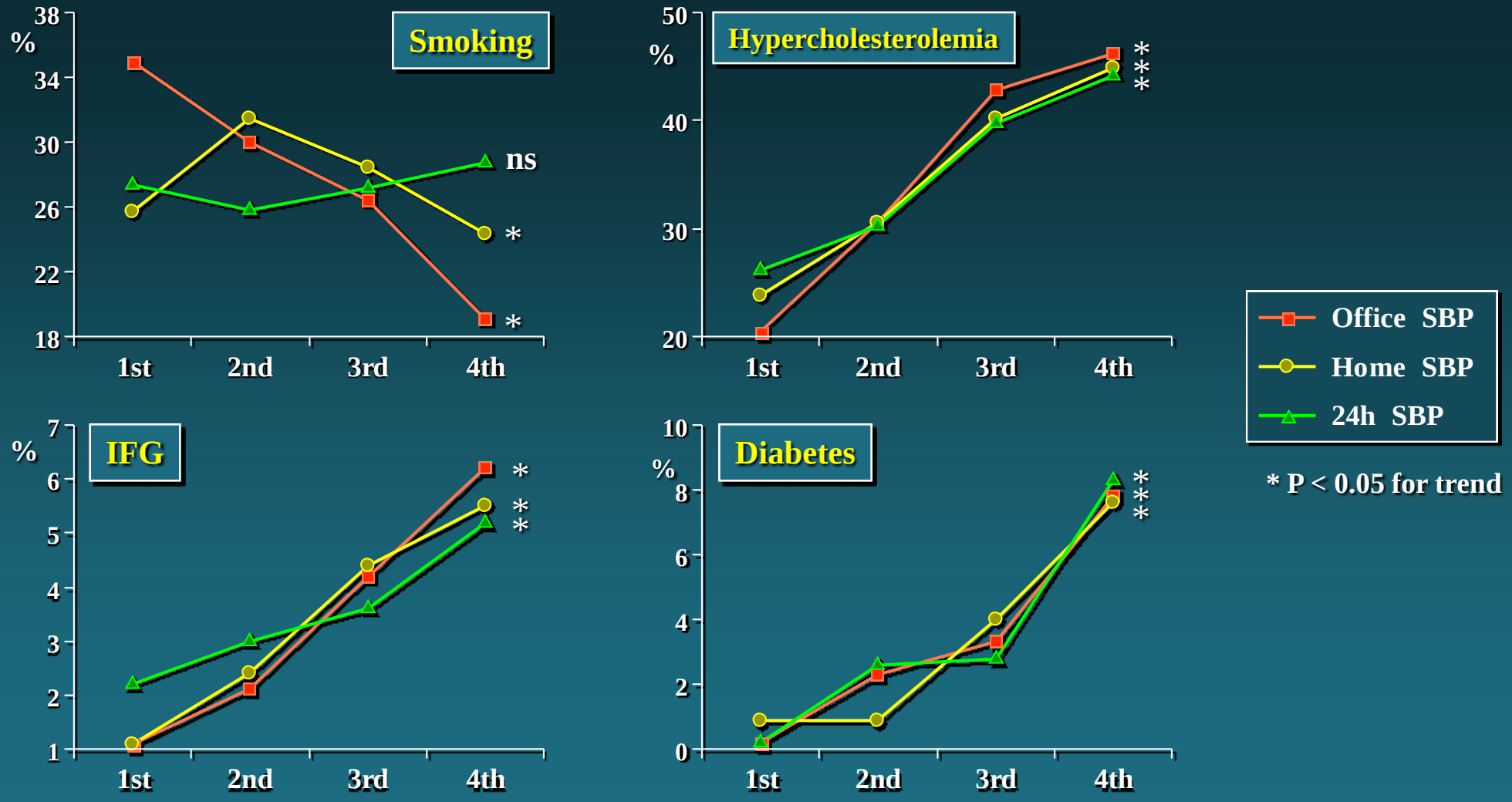
10739 M

Olsen MH et al., J Hum Hypertens 2004; 18: 453-459



Mancia G. *et al., J Hypertens* 2004; 22: 51-57

Relationship of Smoking Habit, Hypercholesterolemia, IFG and Diabetes to Office, Home, 24h SBP Quartiles



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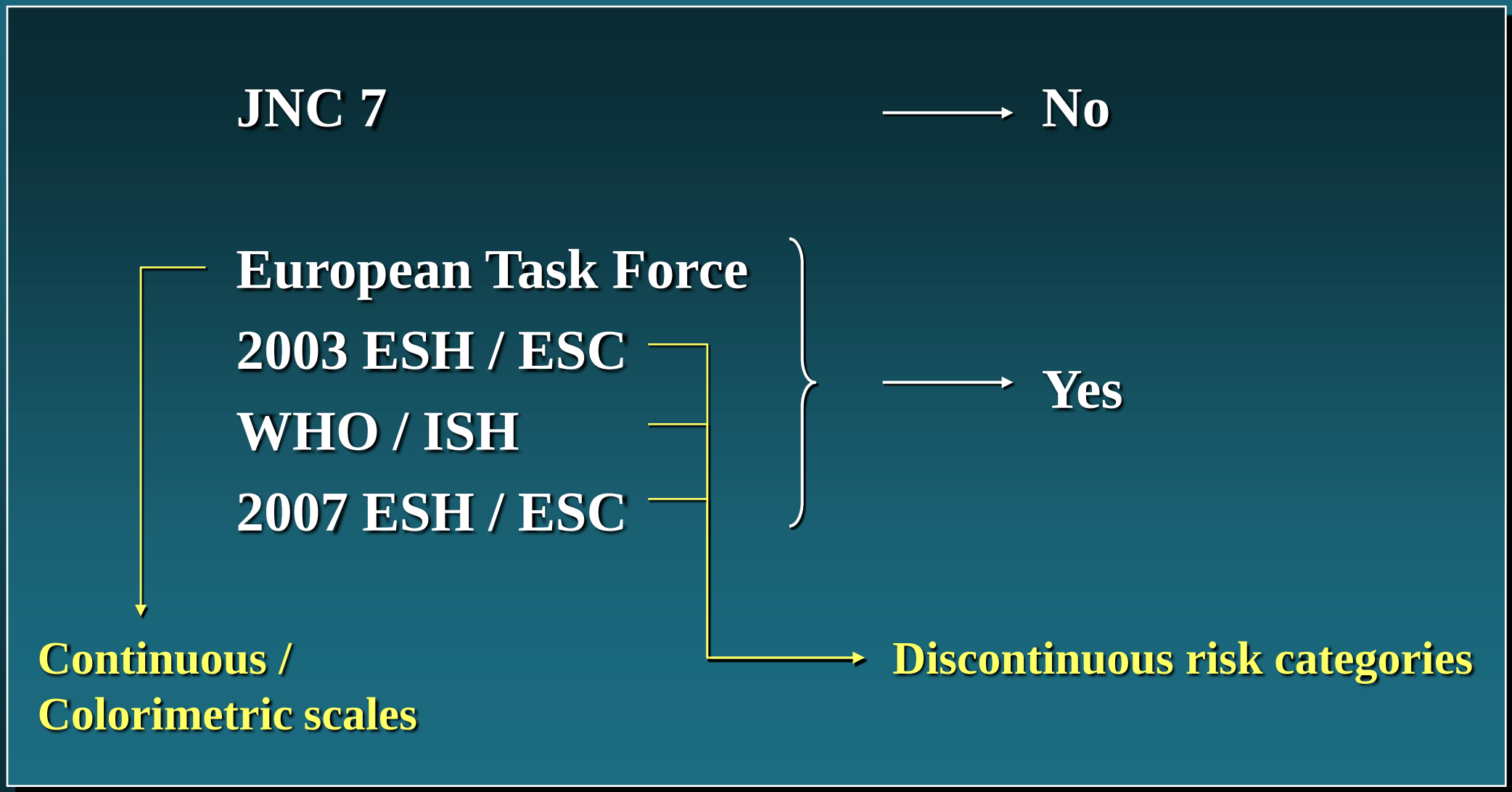
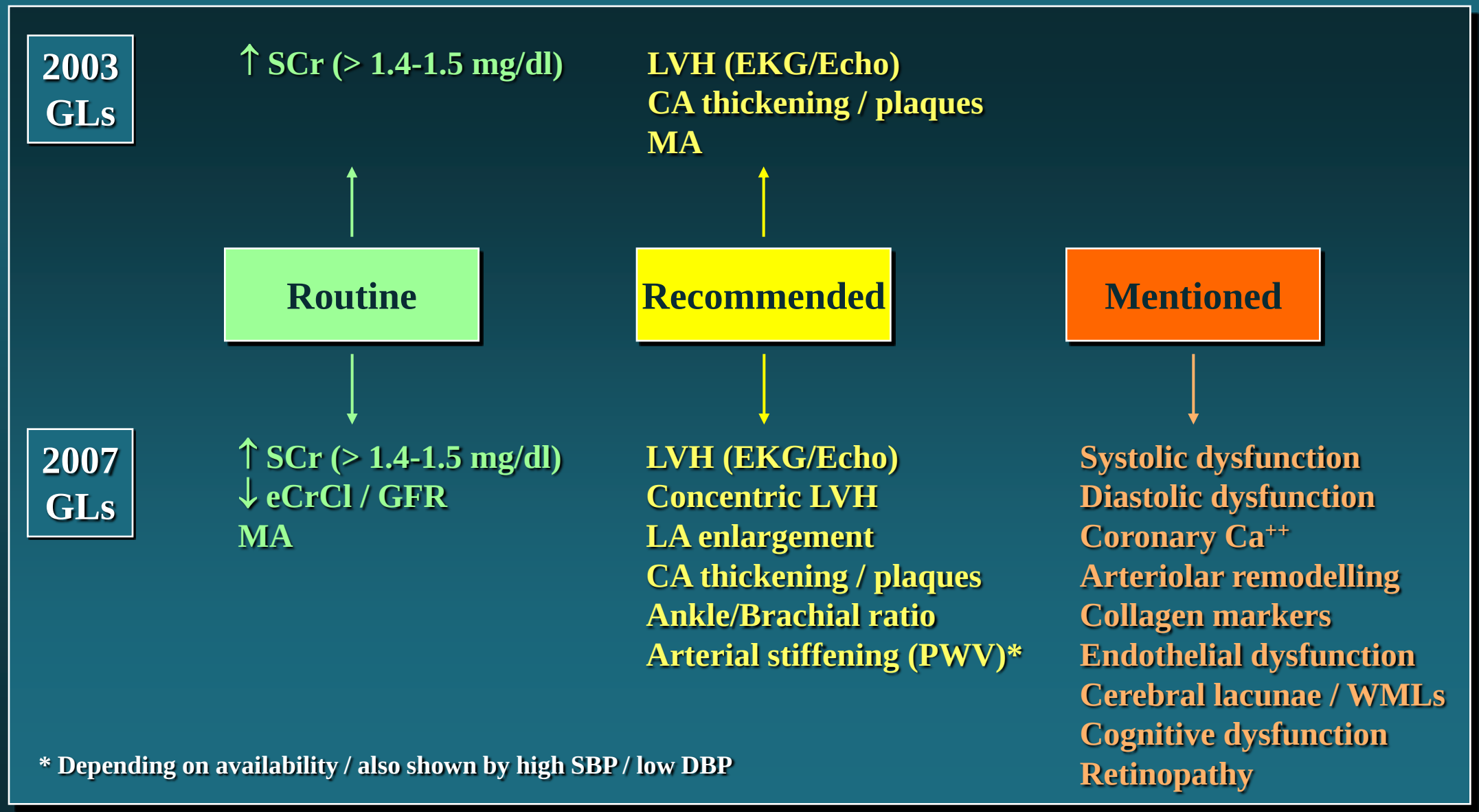
Mancia et al., Hypertension 2005; 45: 1072

Assessment of Total (Global) CV Risk

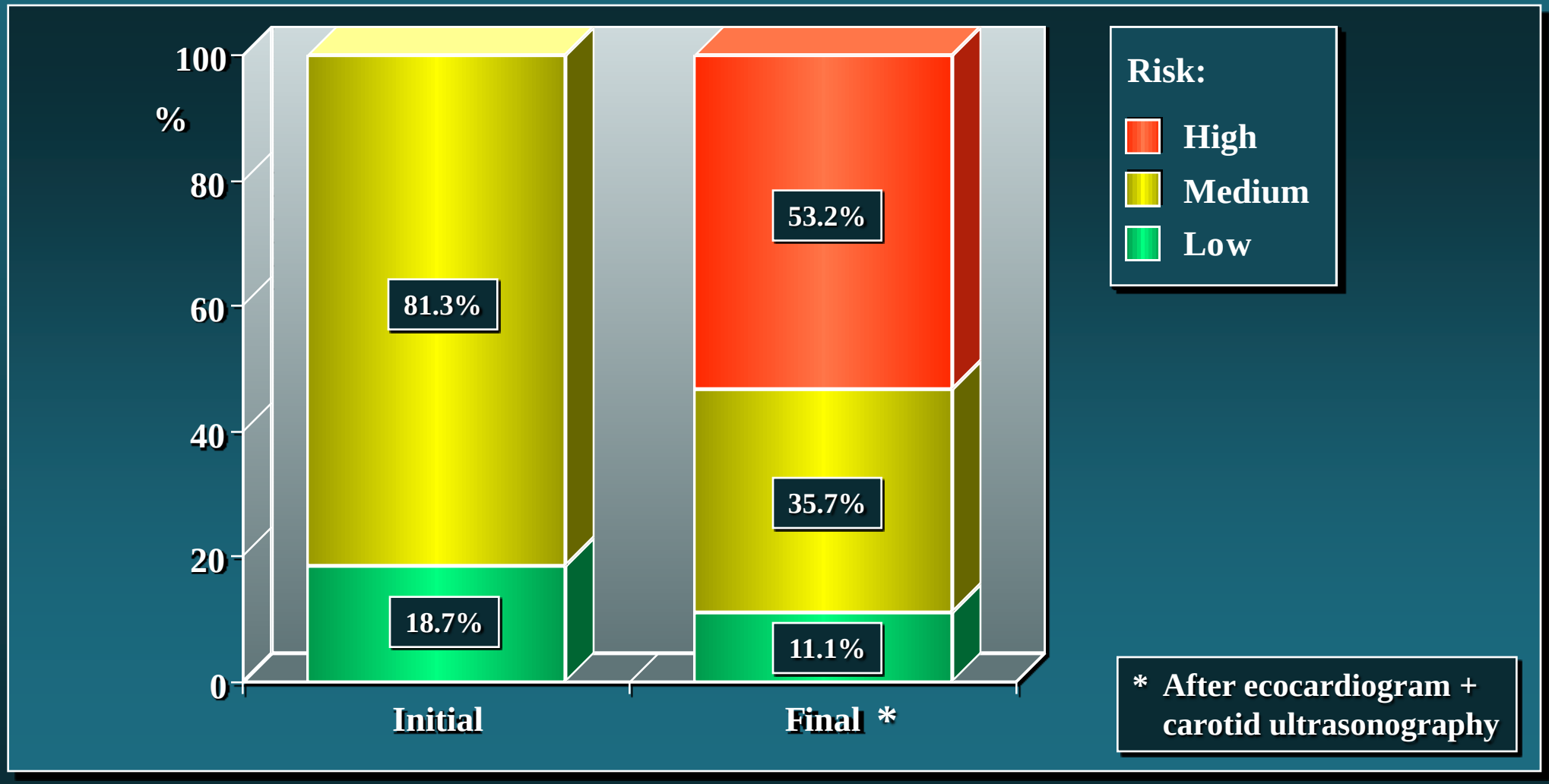


Mancia 2005

ESH/ESC Guidelines and Search for Subclinical Organ Damage



Risk Reclassification in APROS Study



Cuspidi *et al.*, *J Hypertens* 2002; 20: 1307-1315

Treatment of Hypertensives at High / Very High Risk

- Intensive life-style changes (use of specific professionals)
- Drug treatment in the high-normal BP range
- Target BP < 130/80 mmHg
- BP control without delay

Combination treatment as first step

- Antiplatelet / lipid lowering treatment
- **Drugs more effective on regression of organ damage to be included**

Mancia 2005

Stratification of CV Risk in Four Categories

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2007 ESH/ESC Guidelines

BP Threshold / Target in the General Hypertensive Population

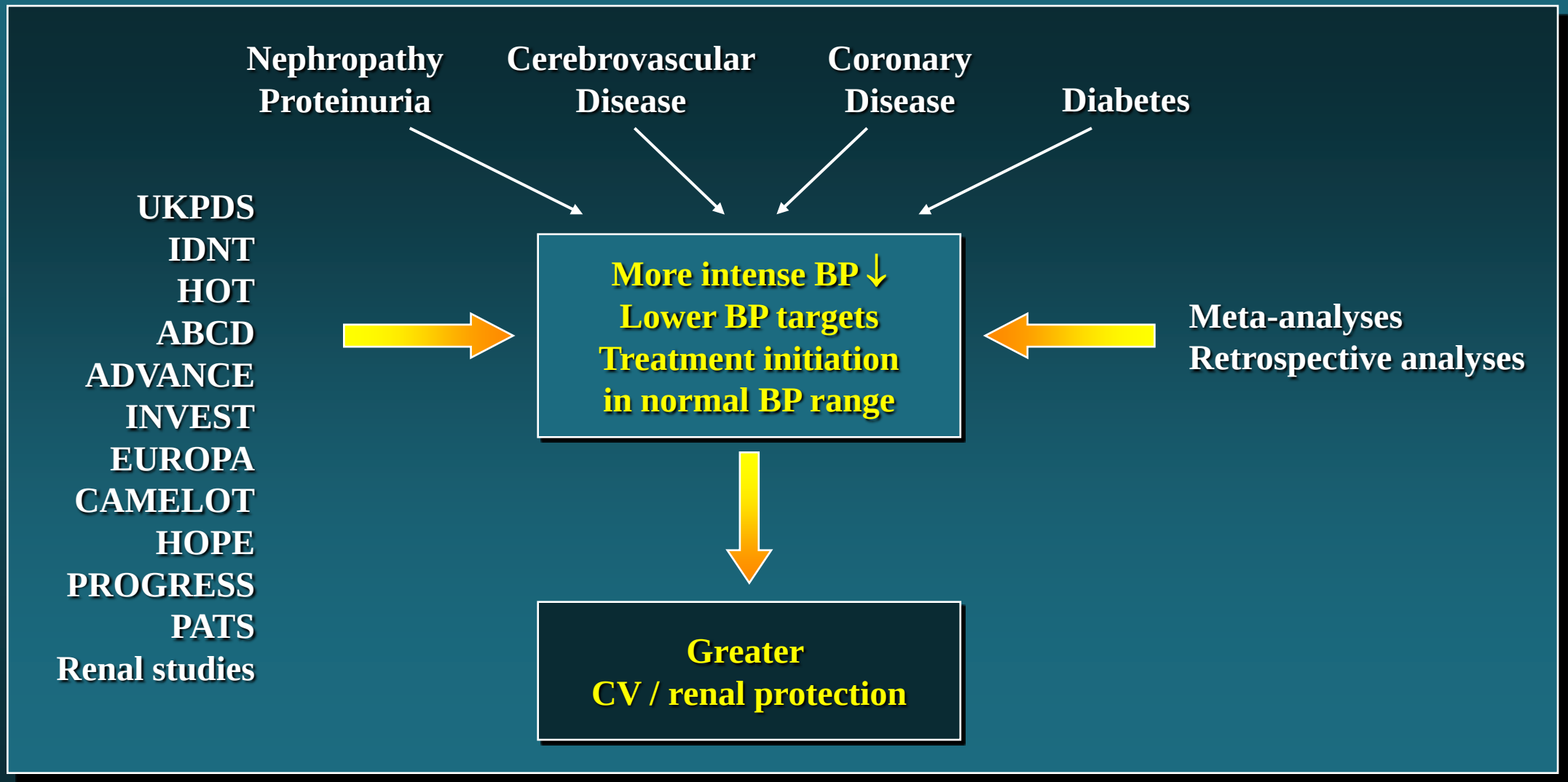
BP threshold

≥ 140/90 mmHg

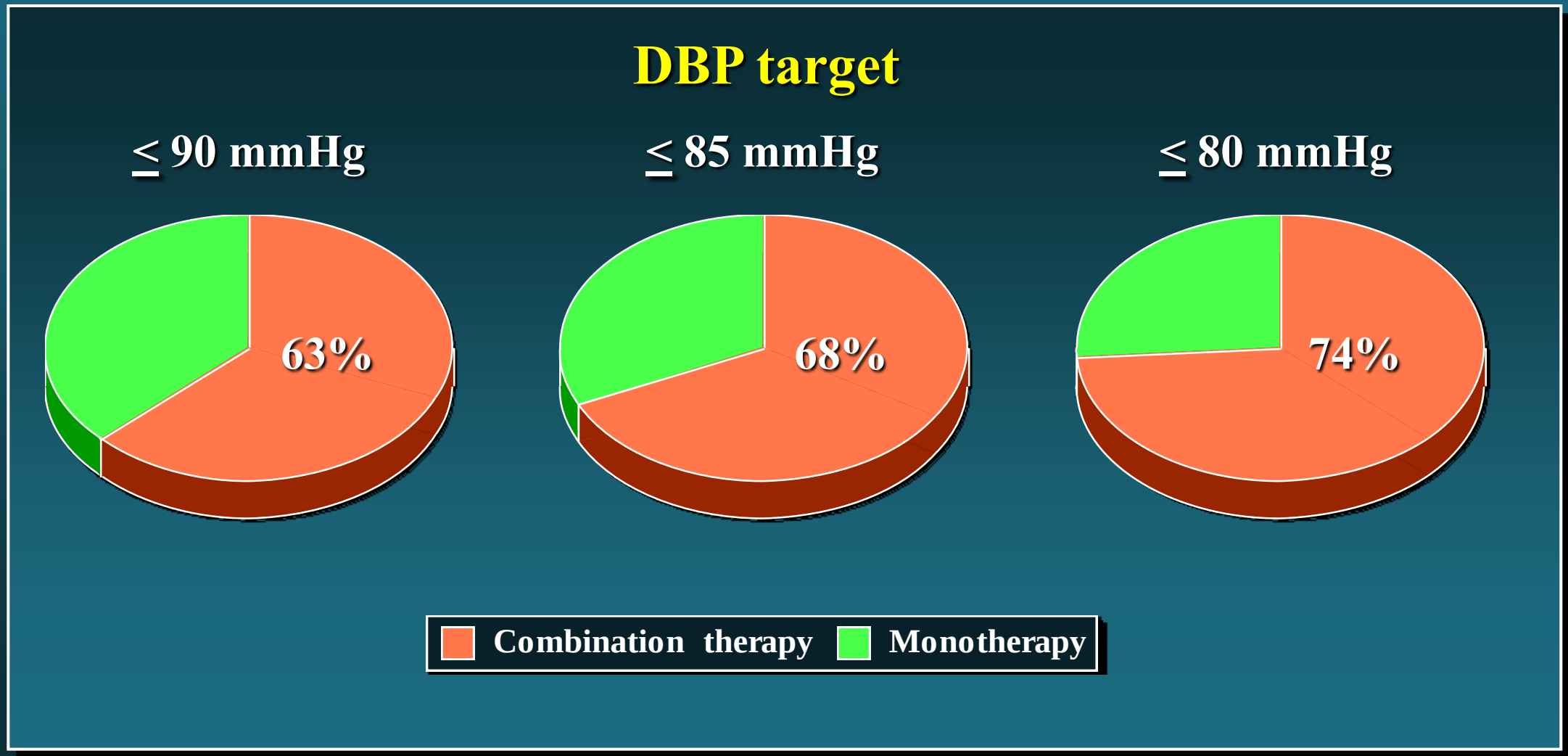
BP target

< 140/90 mmHg
(and lower values if tolerated)

Beneficial Effects of Tighter BP Control

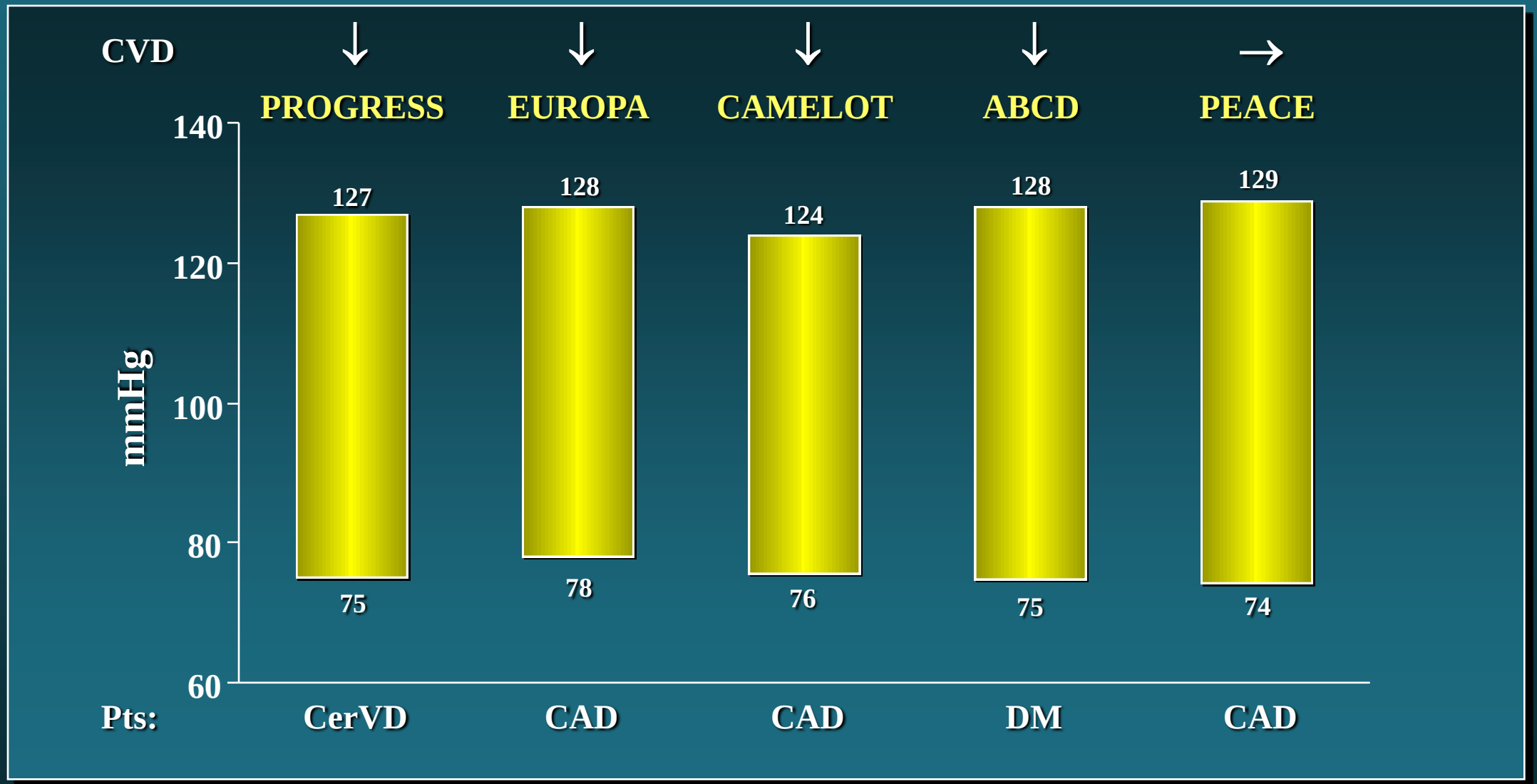


HOT Study:
% of Patients on Combination Reaching Target

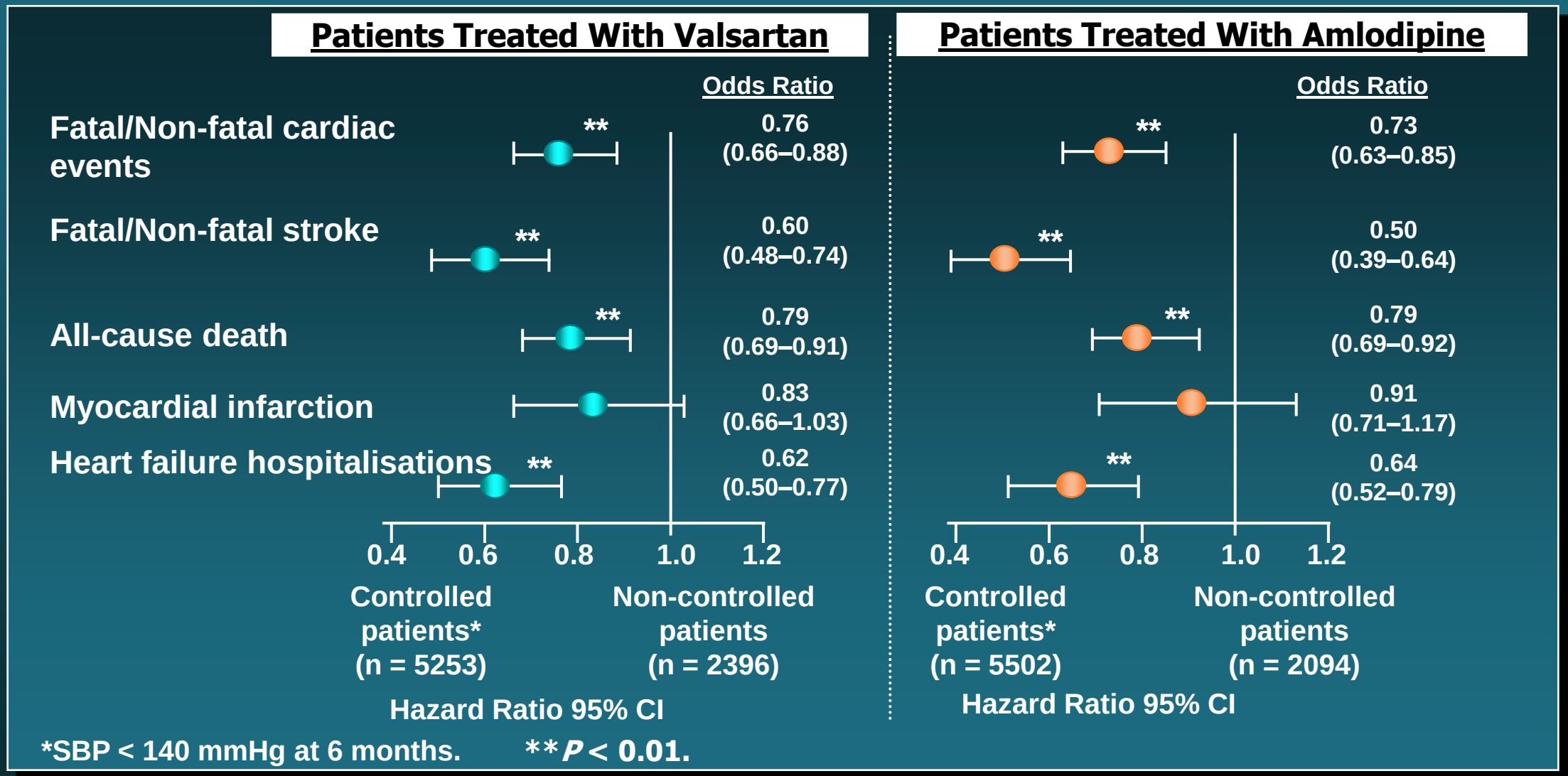


Hansson L. et al., Lancet 1998; 351: 1755-1762

On-treatment BP in Recent Trials



VALUE: Analysis of Results Based on BP Control at 6 Months



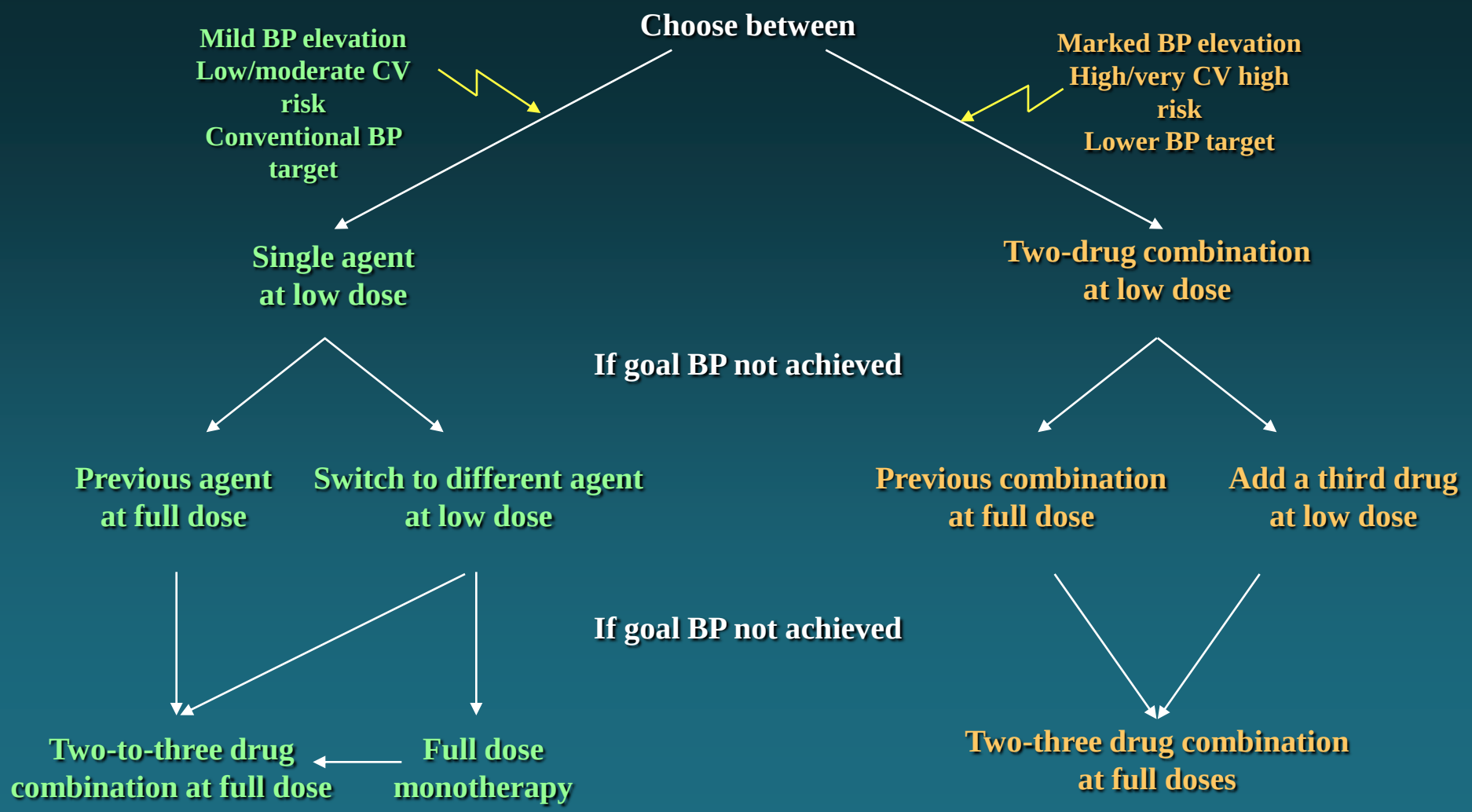
*SBP < 140 mmHg at 6 months. ** *P* < 0.01.

3893 G

Weber MA, et al. Lancet 2004;363:2047–49.

2007 ESH/ESC Guidelines

Monotherapy versus Combination Therapy Strategies



RR of CVD with Low-Dose Aspirin (vs Placebo) in HOT

On-treatment BP (mmHg)	~ 140/83
Medium risk	1.00
High / very high risk	0.78 *

* statistically significant

Zanchetti et al., J Hypertens 2002; 20: 2309

On-Treatment BP and Δ Events with Atorvastatin (vs Placebo) in ASCOT *

- All patients with ≥ 3 risk factors
- BP (mmHg) ~ 138/80
- Stroke -27%
- CHD -29%
- CVD -21%
- Total mortality -13%

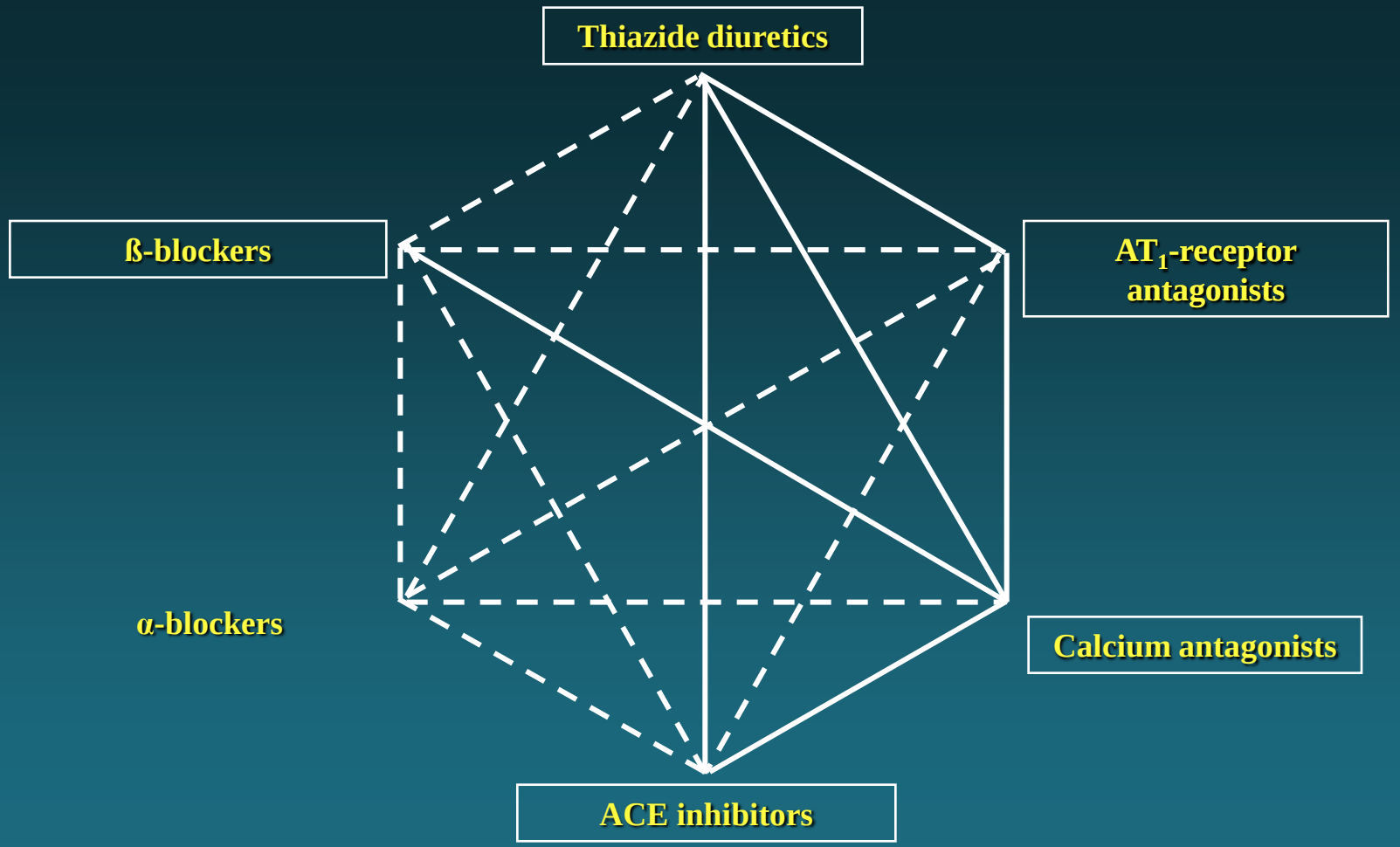
* All changes stastically significant

Importance of Identification of Patients at High / Very High CV Risk

1. Drug treatment to be promptly instituted
2. Combination treatment usually necessary
3. Specific antihypertensive agents may be needed
4. Lower BP threshold (<130/85 mmHg) and targets (<130/80 mmHg) for treatment
5. Use of aspirin and statins

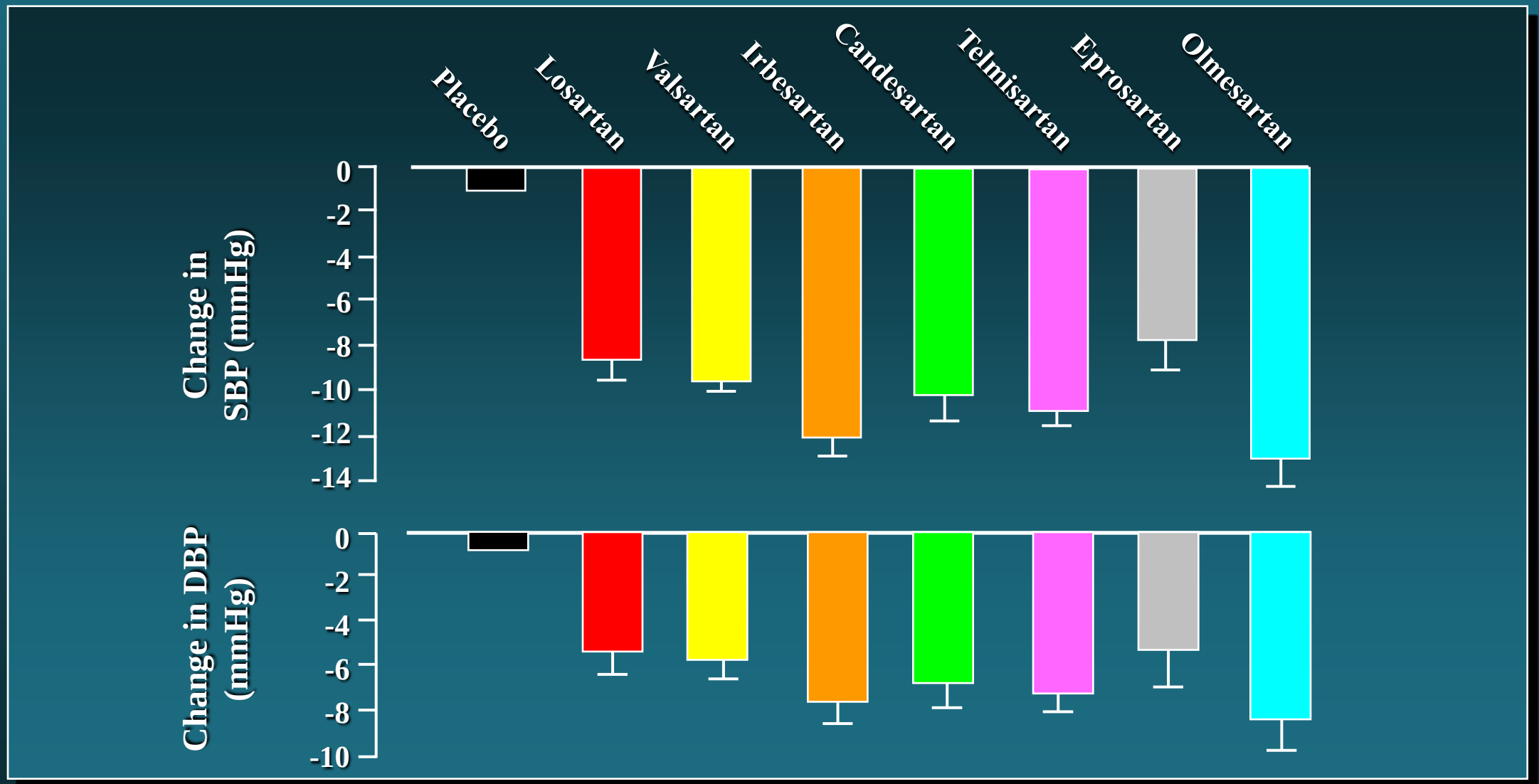
2007 ESH/ESC Guidelines

Combinations between Some Classes of Antihypertensive Drugs



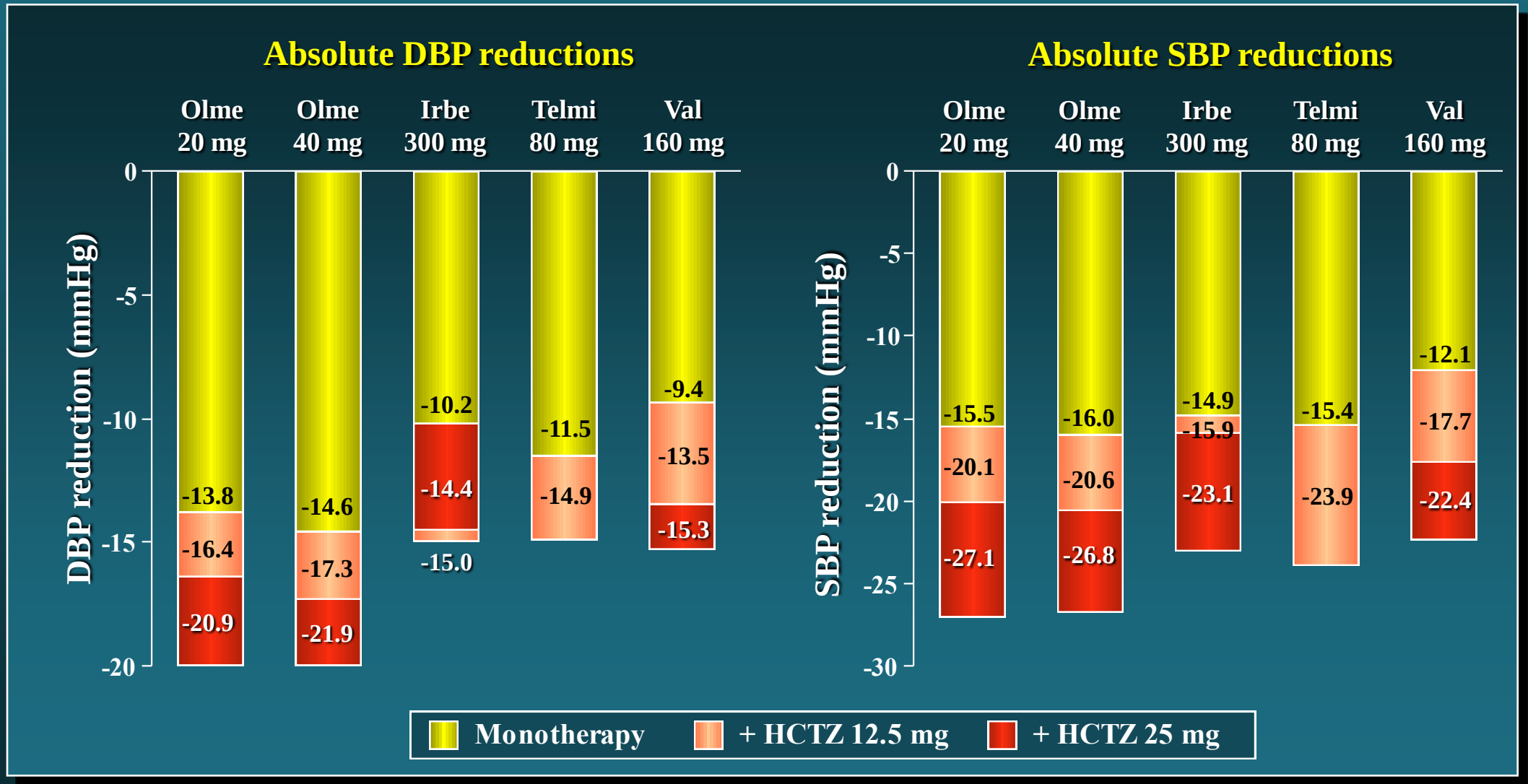
The preferred combinations in the general hypertensive population are represented as thick lines.
The frames indicate classes of agents proven to beneficial in controlled intervention trials.

Systematic Review of the Antihypertensive Activity of ARBs: BP Reduction over 24 hours



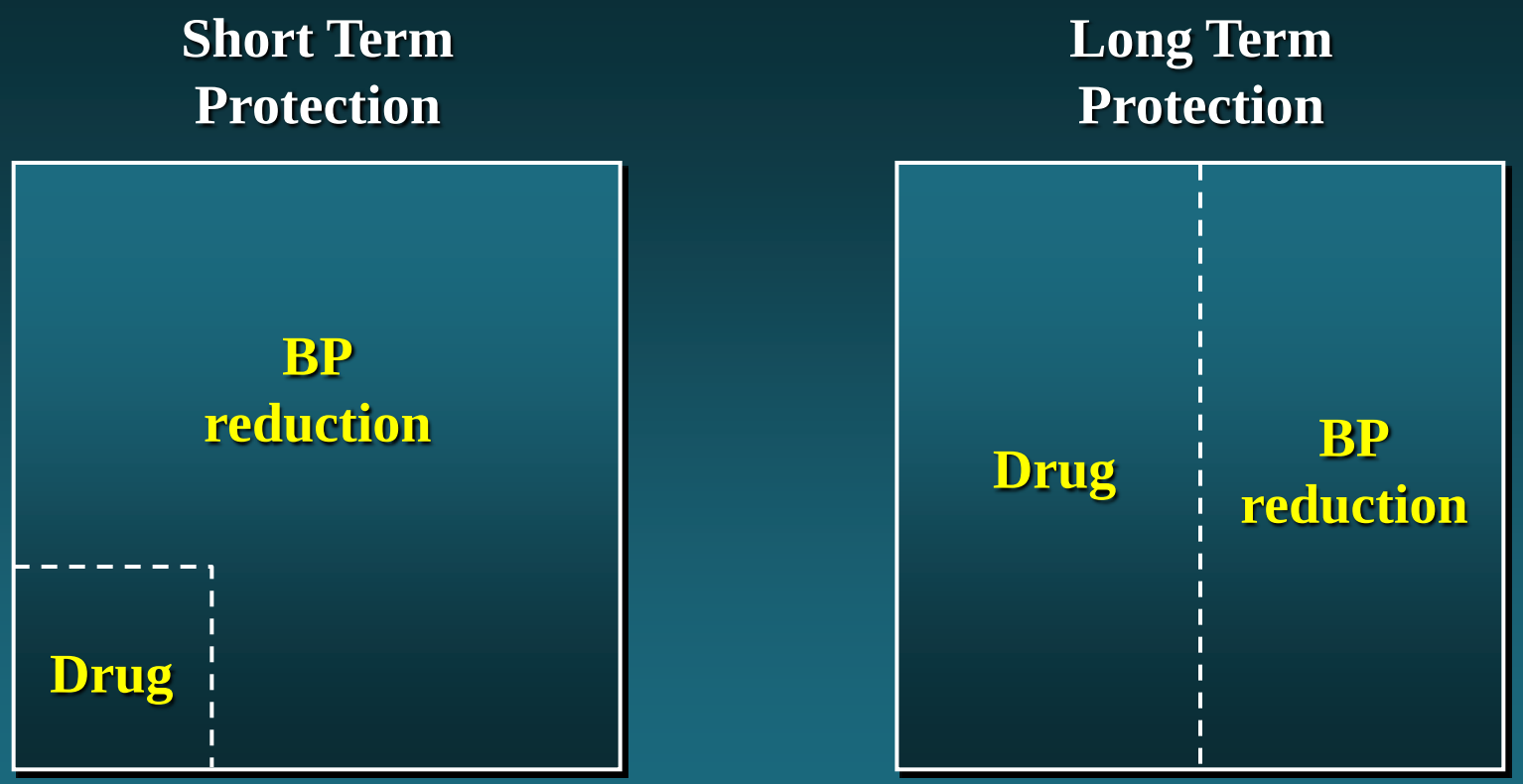
Fabia et al. J Hypertension 2007; 25: 1327–36

Combination Treatment with ARB: Unique Position of Olmesartan



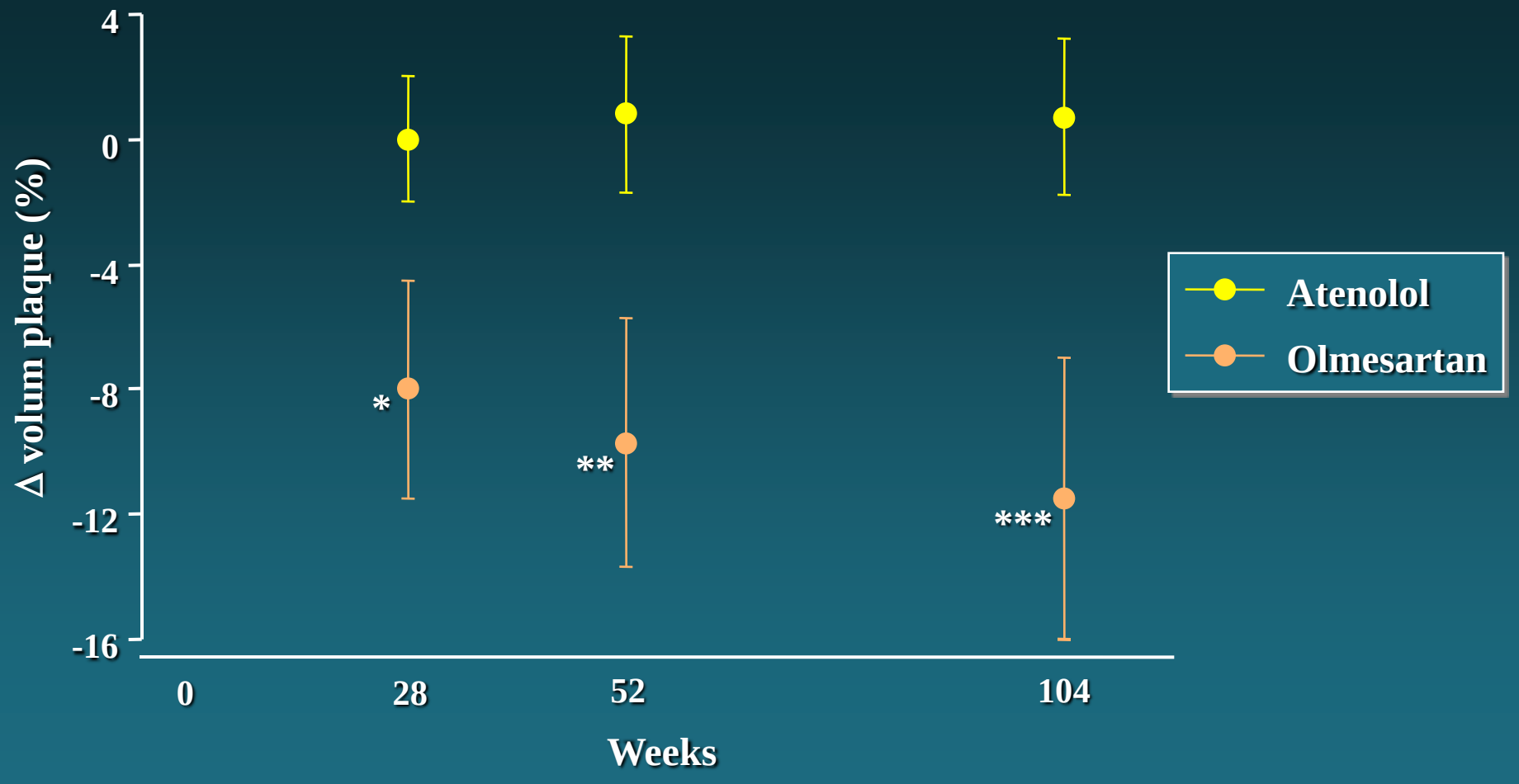
4194 G

Role of Drugs' Specific Properties vs BP Reduction *per se* in CV Protection of Hypertensive Patients



Mancia G, 2004

Vascular Protection by Olmesartan vs. Atenolol: The MORE Study



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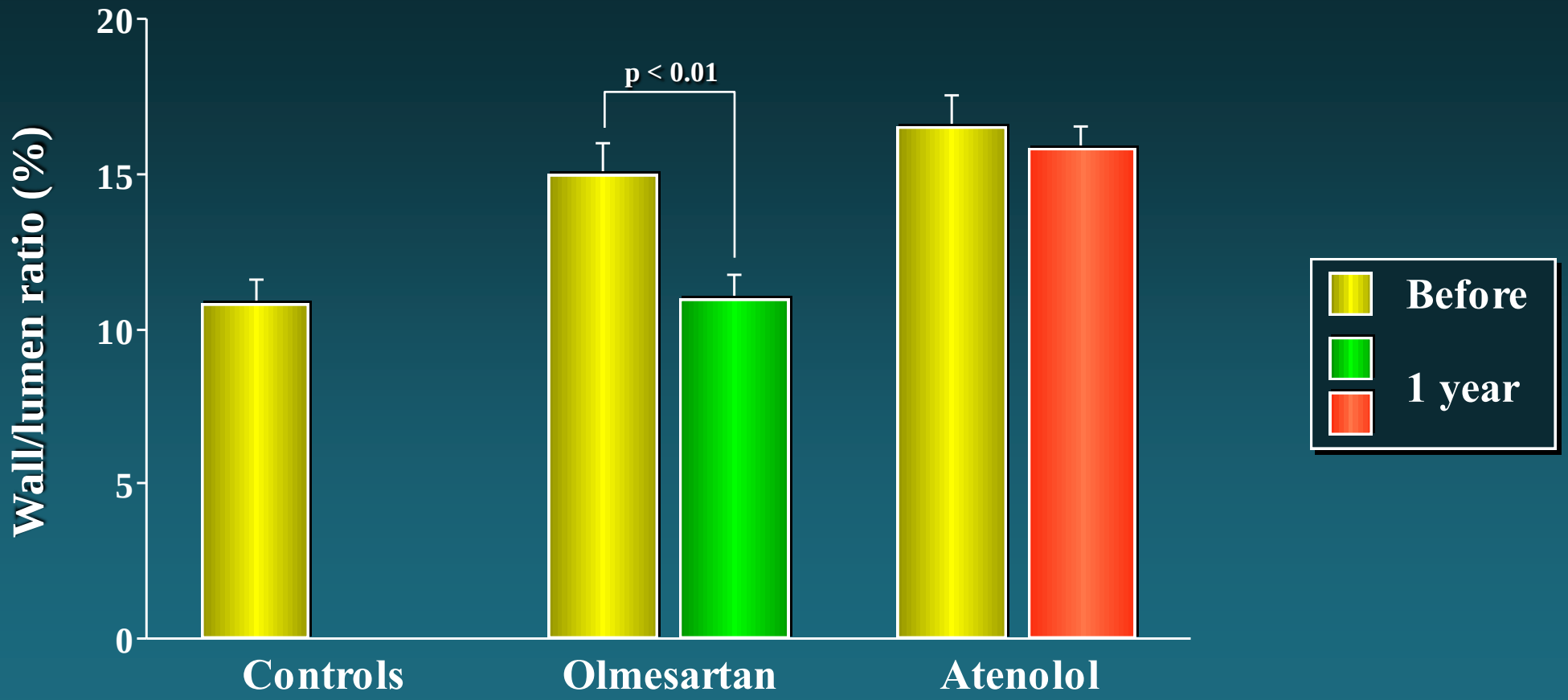
Stumpe K et al. Ther Adv CV Dis. 2008

Average Changes in Wall-to-lumen Ratio in Normotensive Controls and in Stage 1 Hypertension Patients Before and After 1 Year of Treatment with Olmesartan or Atenolol



4446 G

Smith RD et al., J Am Soc Hypert 2008; 2: 165