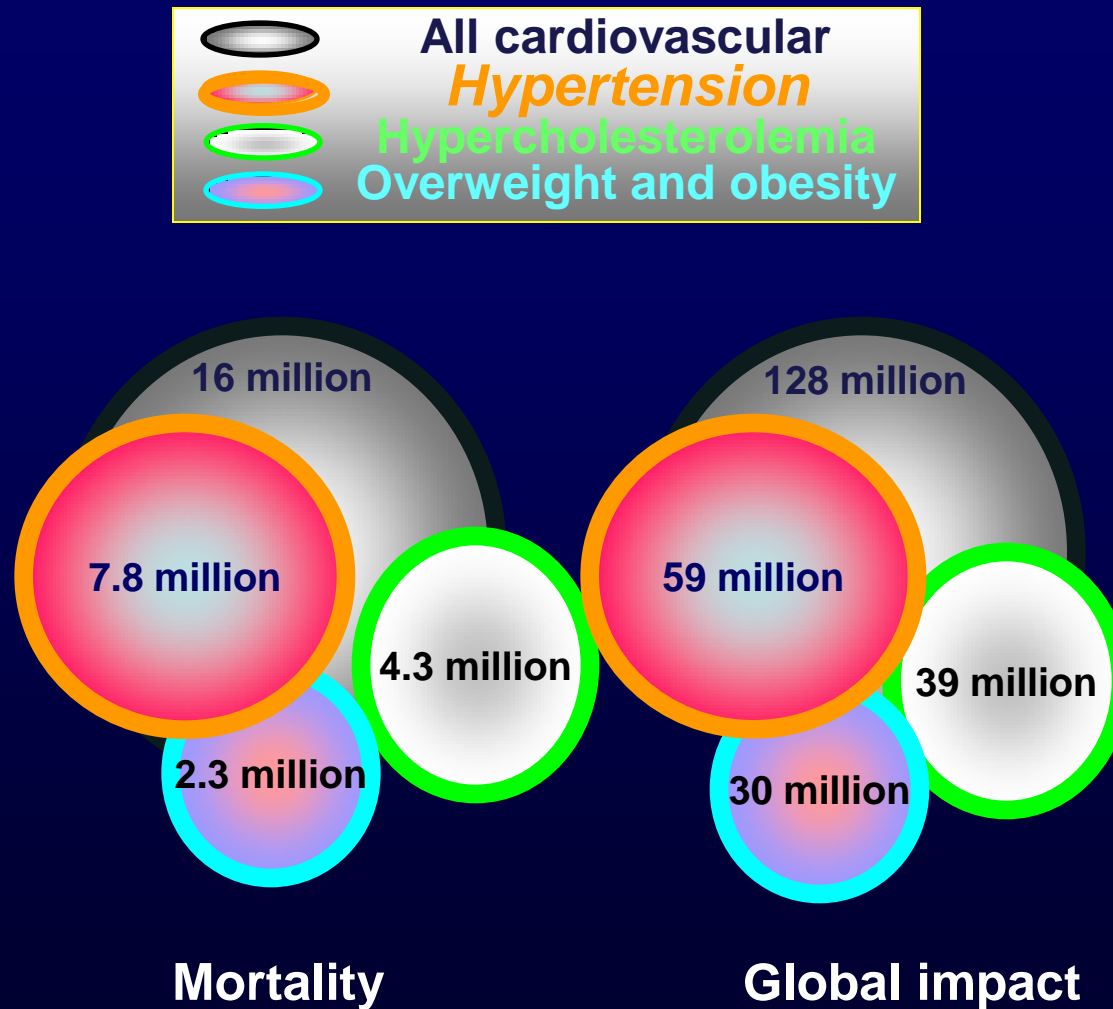


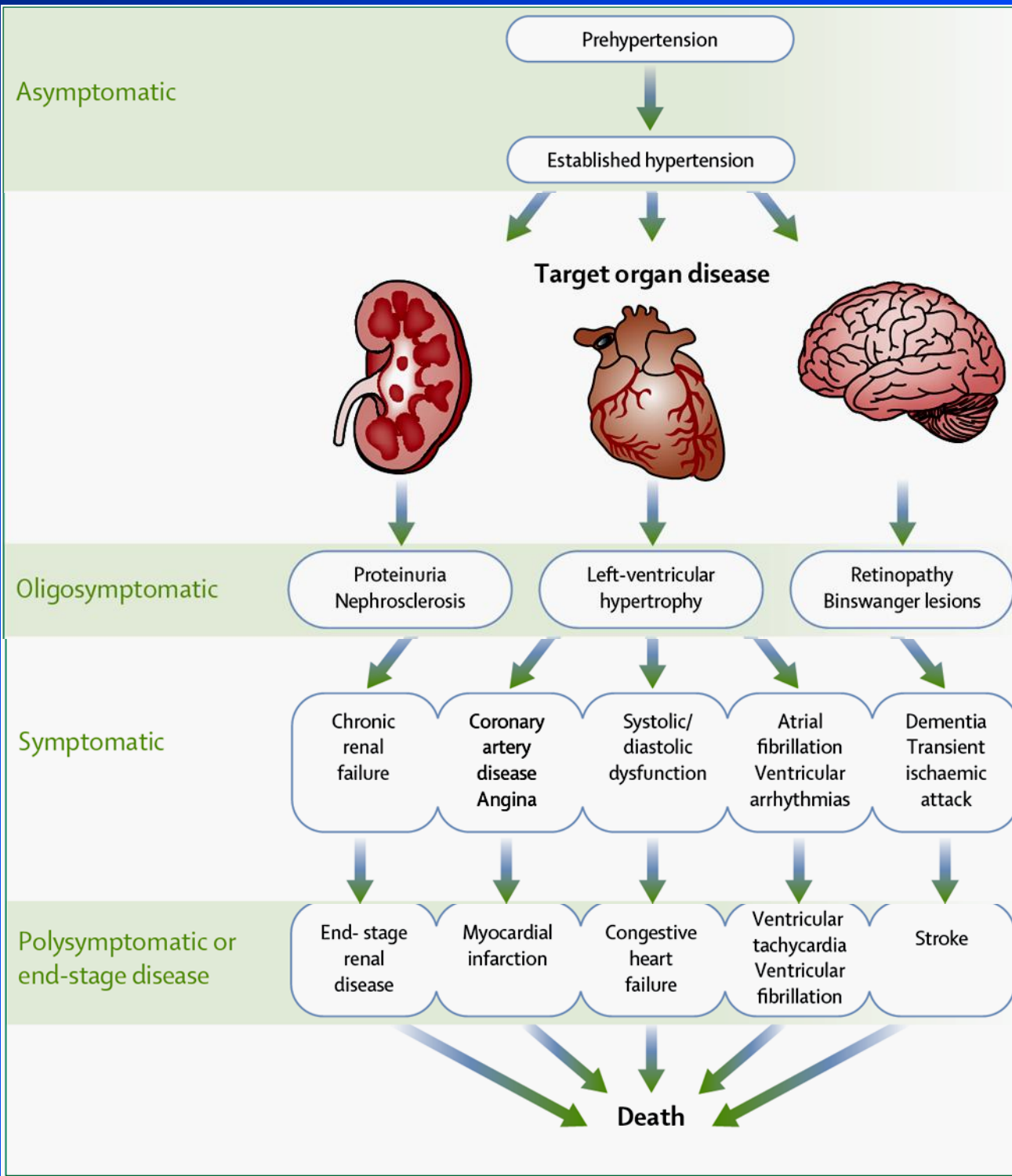
Συχνά Λάθη στη Διαχείριση Αυξημένης Αρτηριακής Πίεσης

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The Main Cause Of Cardiovascular Death Is Essential Hypertension





2013 ESH/ESC Guidelines for the management of arterial hypertension

The Task Force for the management of arterial hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC)

Authors/Task Force Members: Giuseppe Mancia (Chairperson) (Italy)*, Robert Fagard (Chairperson) (Belgium)*, Krzysztof Narkiewicz (Section co-ordinator) (Poland), Josep Redon (Section co-ordinator) (Spain), Alberto Zanchetti (Section co-ordinator) (Italy), Michael Böhm (Germany), Thierry Christiaens (Belgium), Renata Cifkova (Czech Republic), Guy De Backer (Belgium), Anna Dominiczak (UK), Maurizio Galderisi (Italy), Diederick E. Grobbee (Netherlands), Tiny Jaarsma (Sweden), Paulus Kirchhof (Germany/UK), Sverre E. Kjeldsen (Norway), Stéphane Laurent (France), Athanasios J. Manolis (Greece), Peter M. Nilsson (Sweden), Luis Miguel Ruilope (Spain), Roland E. Schmieder (Germany), Per Anton Sirnes (Norway), Peter Sleight (UK), Margus Viigimaa (Estonia), Bernard Waeber (Switzerland), Faiez Zannad (France)



2013 ESH-ESC Guidelines for the Management of Arterial Hypertension

Diagnostic Evaluation

Blood Pressure Measurement

- Office (or clinic) BP
- Out-of-office BP
 - Ambulatory BP monitoring
 - Methodological aspects
 - Daytime / Nighttime / 24h
 - Additional analyses
 - Prognostic significance
 - Home BP monitoring
 - Methodological aspects
 - Prognostic significance
- WC (or isolated office) HT / Masked HT
- Clinical indications for out-of-office BP
- BP during exercise / laboratory stress
- Central BP



Summary of Recommendations on BP Measurement...

Evidence	
Class	Level
I	B

“Office BP is recommended for screening and diagnosis of hypertension”

2013 ESH/ESC Guidelines: Definition and Classification of Office, ABPM and Home Blood Pressure

Category	Systolic		Diastolic
Optimal	<120	and	<80
Normal	120–129	and/or	80–84
High normal	130–139	and/or	85–89
Grade 1 hypertension	140–159	and/or	90–99
Grade 2 hypertension	160–179	and/or	100–109
Grade 3 hypertension	≥180	and/or	≥110
Isolated systolic hypertension	≥140	and	<90

Category	Systolic BP (mmHg)		Diastolic BP (mmHg)
Office BP	≥140	and/or	≥90
Ambulatory BP			
Daytime	≥135	and/or	≥85
Nighttime	≥120	and/or	≥70
24-h	≥130	and/or	≥80
Home BP	≥135	and/or	≥85



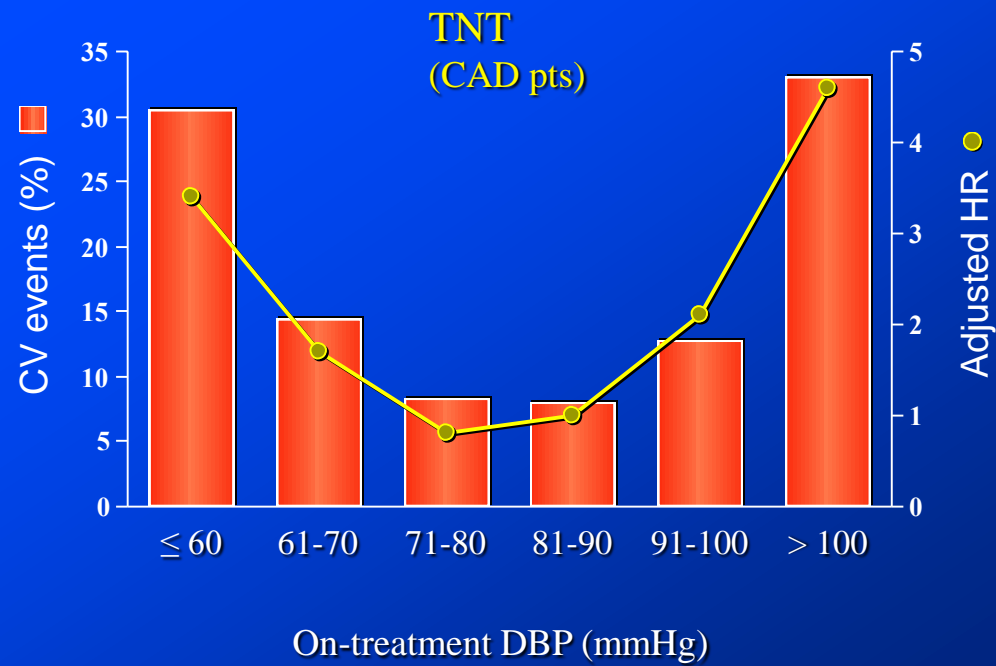
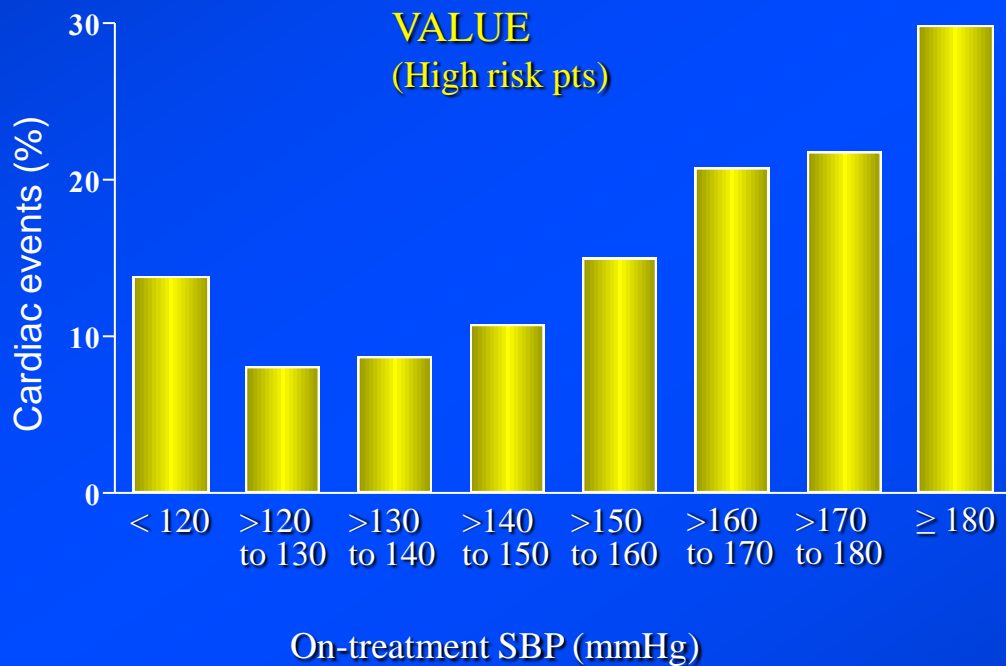
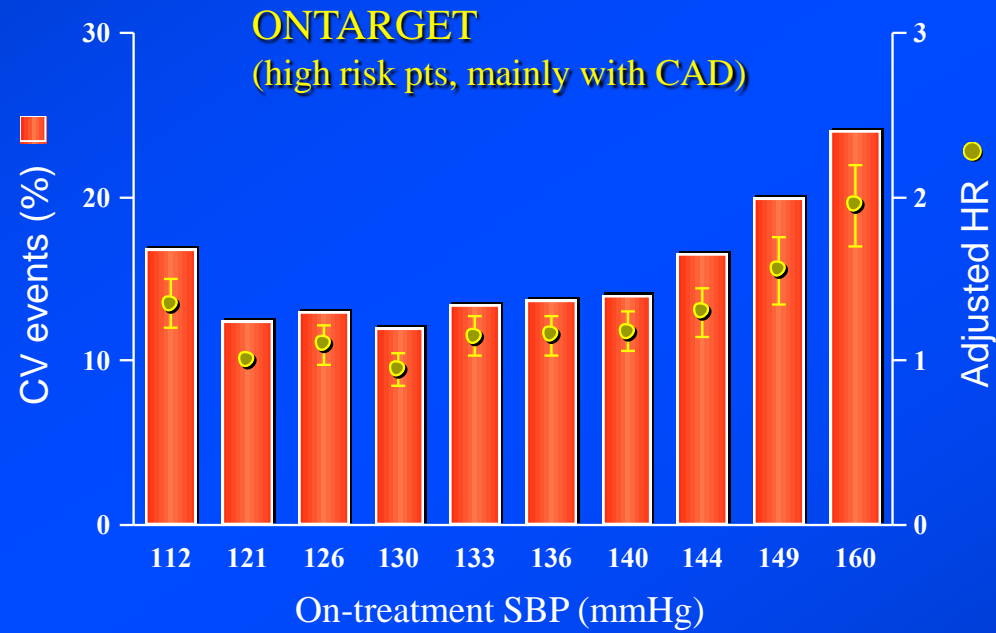
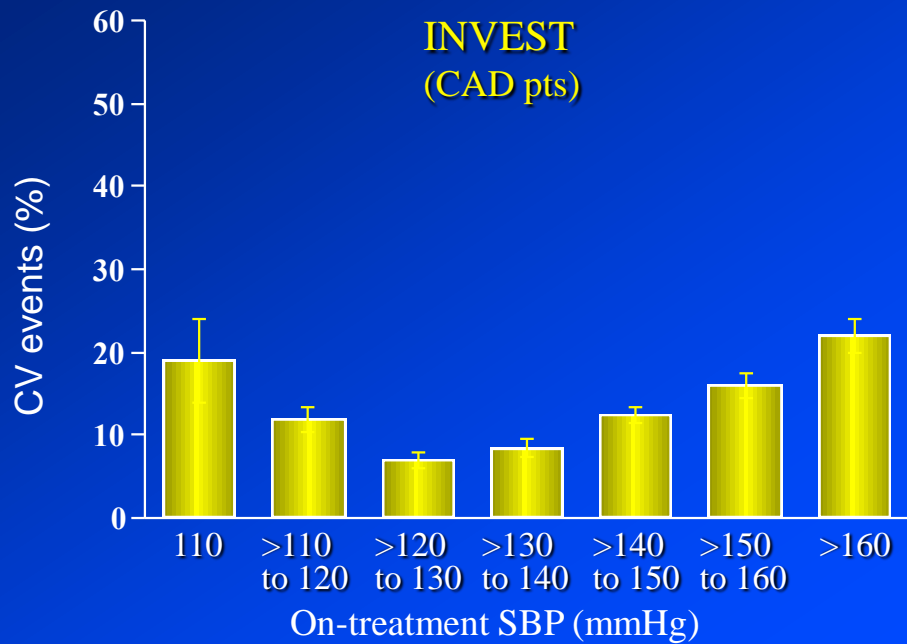
Initiation Of Drug Treatment In Hypertension

Grade 2-3	Recommended (Promptly)	IA
Grade 1 / High CV risk	Recommended	IB
Grade 1 / Low CV risk	Should be considered	IIaB
Elderly	Recommended if SBP \geq 160 mmHg (also > 80 ys of age)	IA
	May be considered if SBP 140-159 mmHg	IIbC
High normal BP	No drug treatment recommended	IIIA



Blood Pressure Goals In Hypertension

- A SBP < 140 mmHg recommended/considered, regardless the level of risk
 - Low/moderate risk (IB)
 - Diabetes (IA)
 - Diabetic/nondiabetic CKD (IIaB)
 - Patients with CHD/previous stroke or TIA (IIaB)
- A DBP < 90 mmHg recommended



SPRINT Trial: Released Friday September 11

- In SPRINT, conducted across 100 clinical centers in the US and Puerto Rico, approximately 9300 patients were randomized to two treatment strategies.
- *In the first treatment arm*, patients were randomized to intensive blood -pressure control, the goal being a **SBP less than 120 mm Hg**. In the intensive -therapy arm, patients were treated with three or more antihypertensive medications, including diuretics, a calcium -channel blocker and an ACE inhibitor.
- *With the second strategy*, patients were randomized to standard blood- pressure control, the aim of which was to achieve **a target of less than 140 mm Hg**. Patients were treated with an average of two antihypertensive medications.

SPRINT Trial: Released Friday September 11

In the Systolic Blood Pressure Intervention Trial (SPRINT), investigators report that treating high-risk hypertensive adults 50 years of age and older to a target of 120 mm Hg *significantly reduced*

- *cardiovascular events by 30%***
- *and all-cause mortality by nearly 25%***

when compared with patients treated to a target of 140 mm Hg.

ESH/ESC Guidelines

Stratification of CV Risk in Four Categories

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

<10%	10-15%	15-20%	20-30%	>30%
	< 4%	4-5%	5-8%	>8%

Cardiovascular event rate in 10 years

Risk for cardiovascular death in
10 years (SCORE)

Choice Of Antihypertensive Drugs - Conclusions From 2013 (And 2003 And 2007) Guidelines

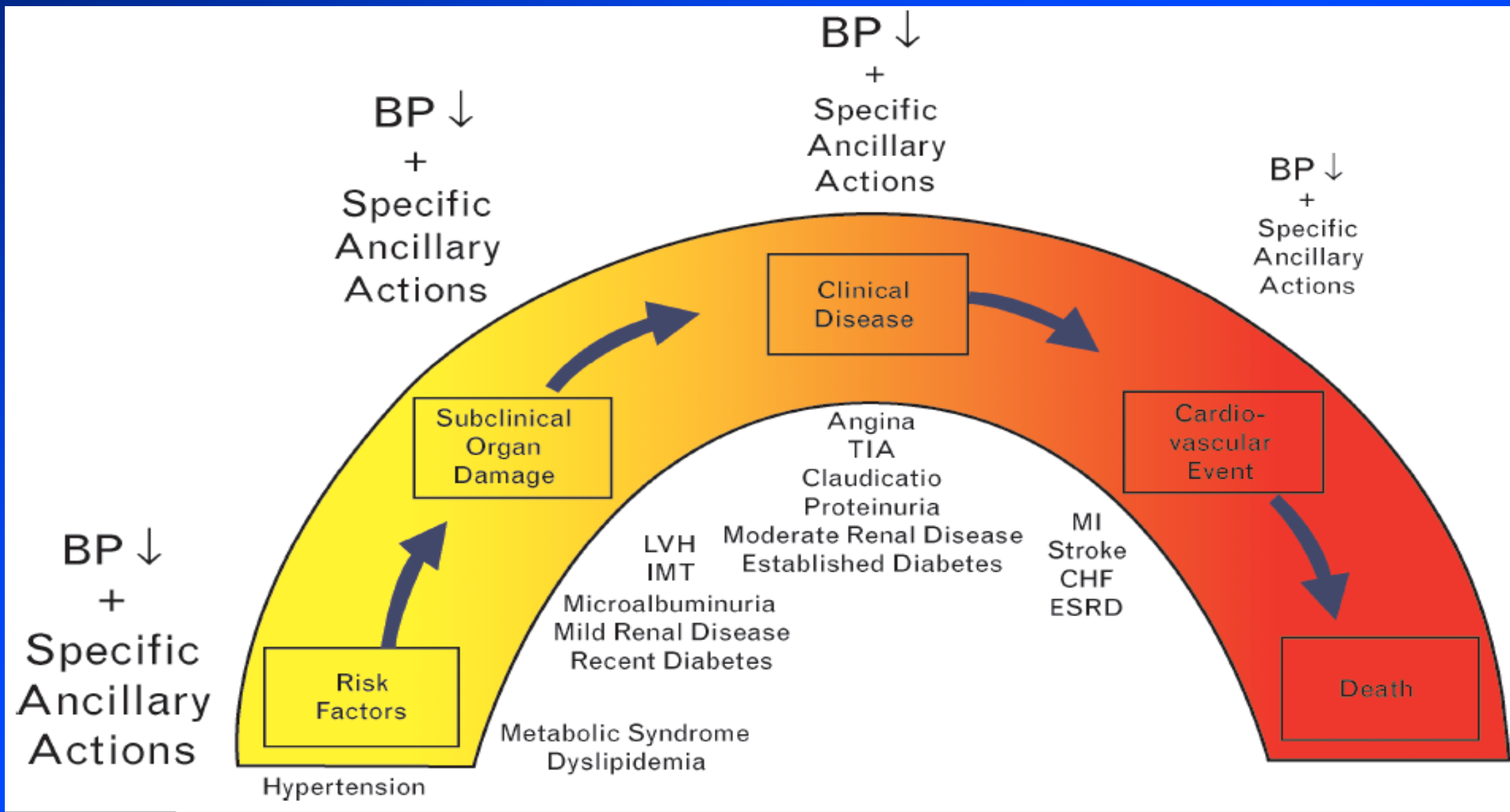
- The main benefits of antihypertensive treatment are due to lowering BP “**per se**” and are largely independent of the drug employed
- Although meta-analyses occasionally claim superiority of one class for some outcomes this largely depends on selection bias of trials. The largest meta-analyses do not show clinically relevant between-class differences
- **Current Guidelines reconfirm that the following drugs classes are all suitable for initiation and maintenance of antihypertensive treatment either as monotherapy or in some combinations with each other (IA)**
 - **Diuretics (thiazides / chlorthalidone / indapamide)**
 - **Beta-blockers**
 - **Calcium antagonists**
 - **ACE-inhibitors**
 - **Angiotensin receptor blockers**



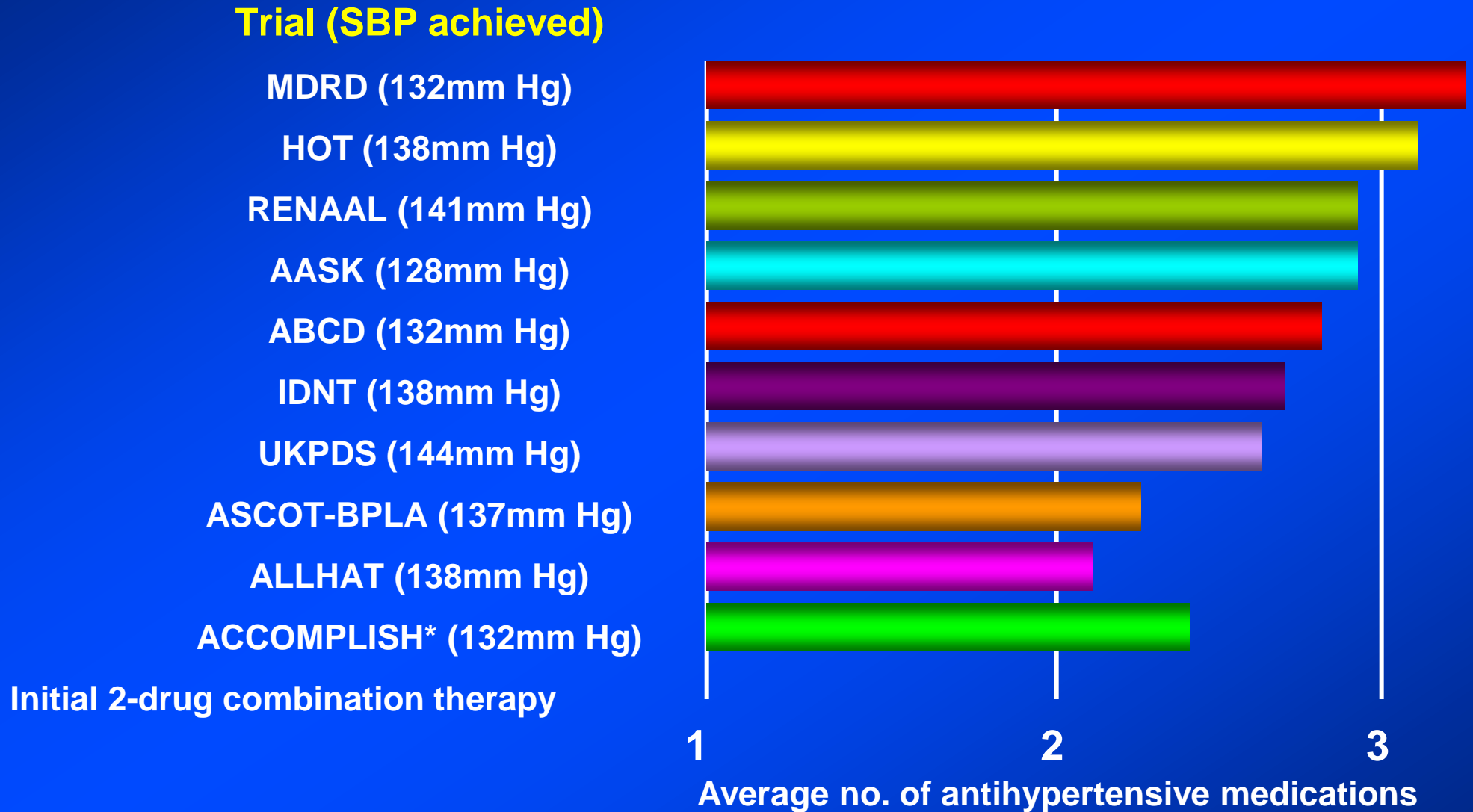
Drugs To Be Preferred In Specific Conditions

Condition	Drug
Asymptomatic organ damage	
LVH	ACE inhibitor, calcium antagonist, ARB
Asymptomatic atherosclerosis	Calcium antagonist, ACE inhibitor
Microalbuminuria	ACE inhibitor, ARB
Renal dysfunction	ACE inhibitor, ARB
Clinical CV event	
Previous stroke	Any agent effectively lowering BP
Previous myocardial infarction	BB, ACE inhibitor, ARB
Angina pectoris	BB, calcium antagonist
Heart failure	Diuretic, BB, ACE inhibitor, ARB, mineralocorticoid receptor antagonists
Aortic aneurysm	BB
Atrial fibrillation, prevention	Consider ARB, ACE inhibitor, BB or mineralocorticoid receptor antagonist
Atrial fibrillation, ventricular rate control	BB, non-dihydropyridine calcium antagonist
ESRD/proteinuria	ACE inhibitor, ARB
Peripheral artery disease	ACE inhibitor, calcium antagonist
Other	
ISH (elderly)	Diuretic, calcium antagonist
Metabolic syndrome	ACE inhibitor, ARB, calcium antagonist
Diabetes mellitus	ACE inhibitor, ARB
Pregnancy	Methyldopa, BB, calcium antagonist
Blacks	Diuretic, calcium antagonist

The CV continuum in HTN and the relative prevention of BP lowering and the ancillary action of drugs.

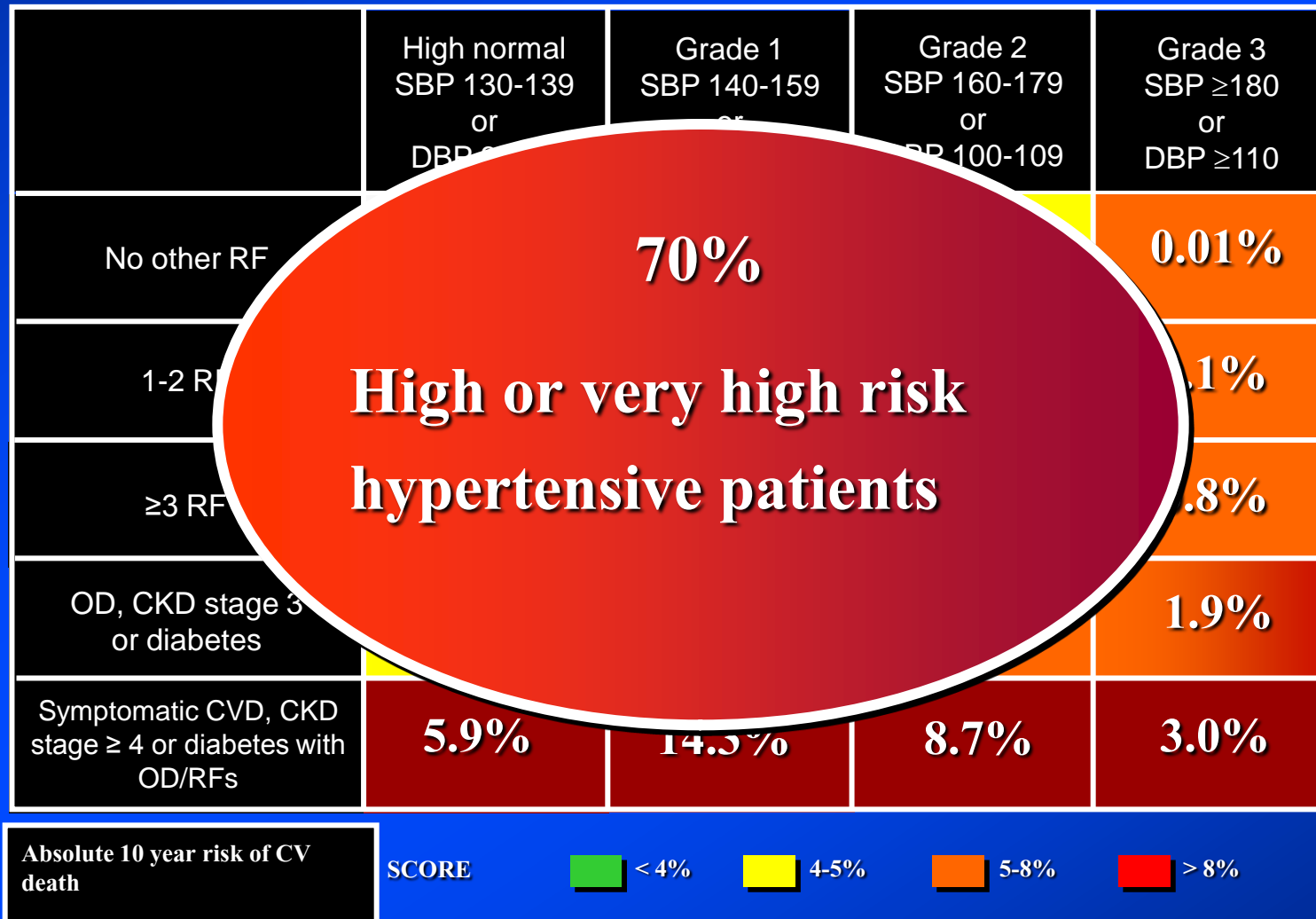


Average Number of Antihypertensive Agents Needed per Patient to Achieve Target BP Goals



Cardiovascular Risk Stratification

DICOPRESS Study: 22,639 patients (>18 years) seen by GPs in Spain



ESH/ESC 2013 Guidelines Pharmacological Treatment

Mild BP elevation
Low/moderate CV risk

Choose between

Marked BP elevation
High/very high CV risk

Class IIb Level C

Low-dose
monotherapy

Low-dose combination
of two drugs

If target BP not achieved

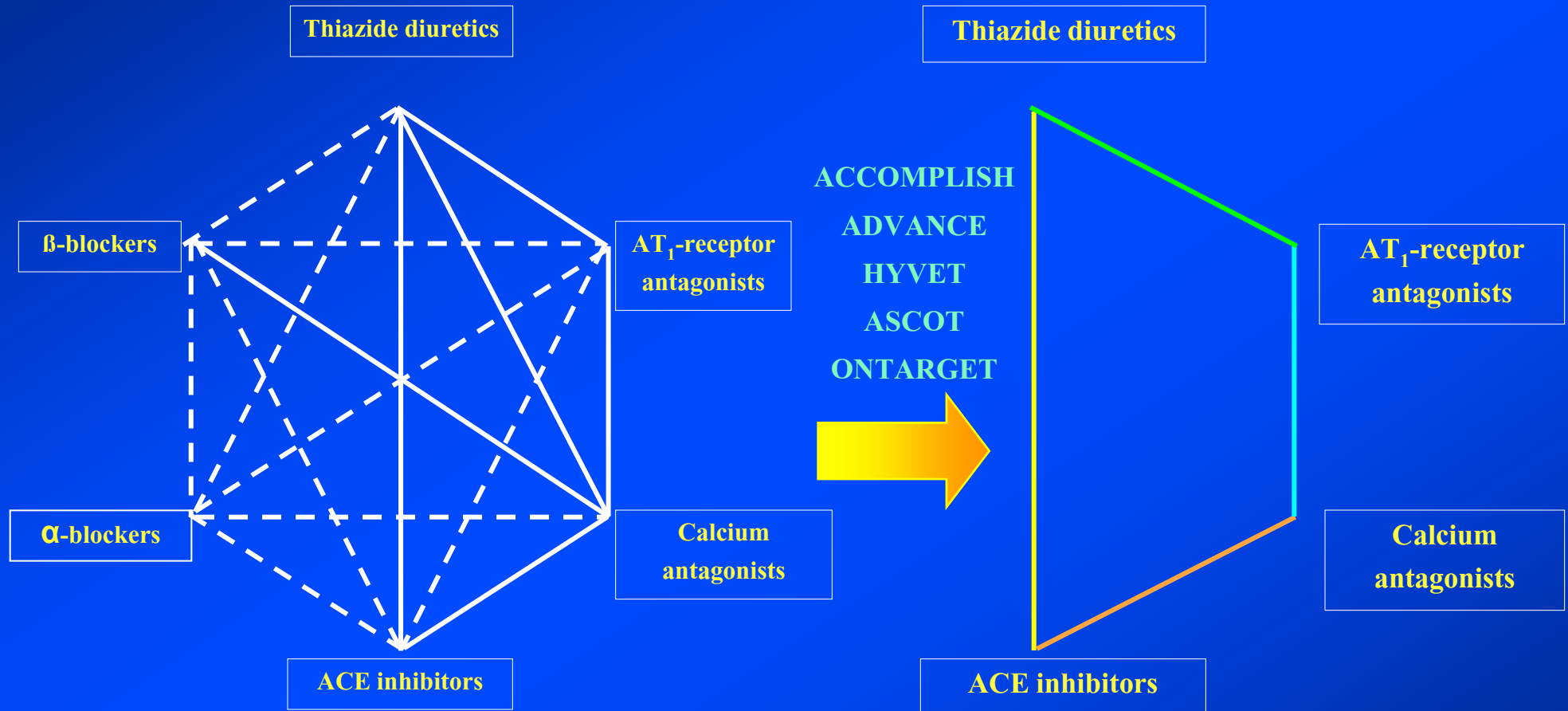
Previous
combination at full
dose

Add a third drug
at low dose

If target BP not achieved

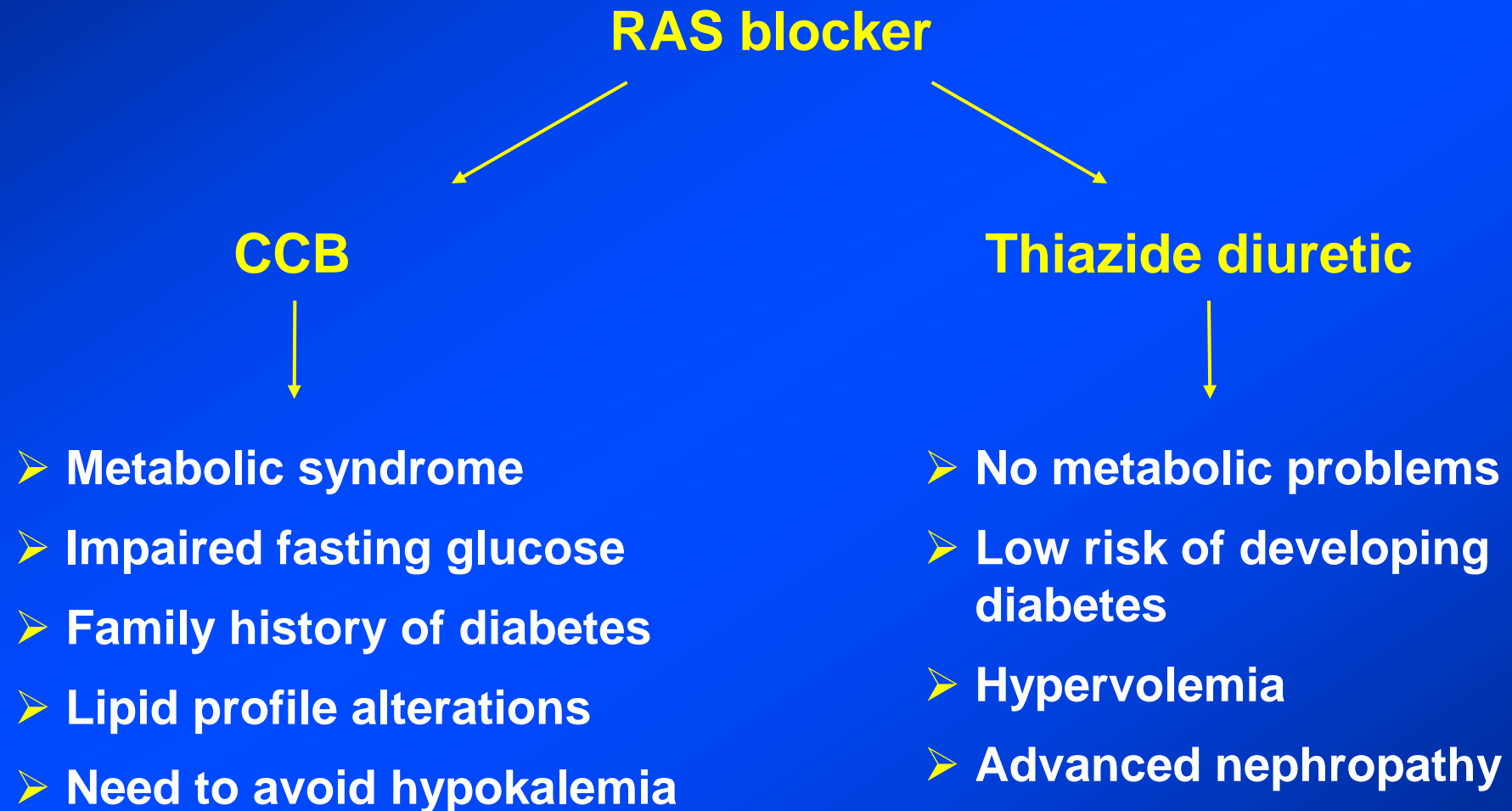
Combination of 2-3 drugs
at effective doses

2013 ESH/ESC Guidelines Combinations Between Some Classes of Antihypertensive Drugs

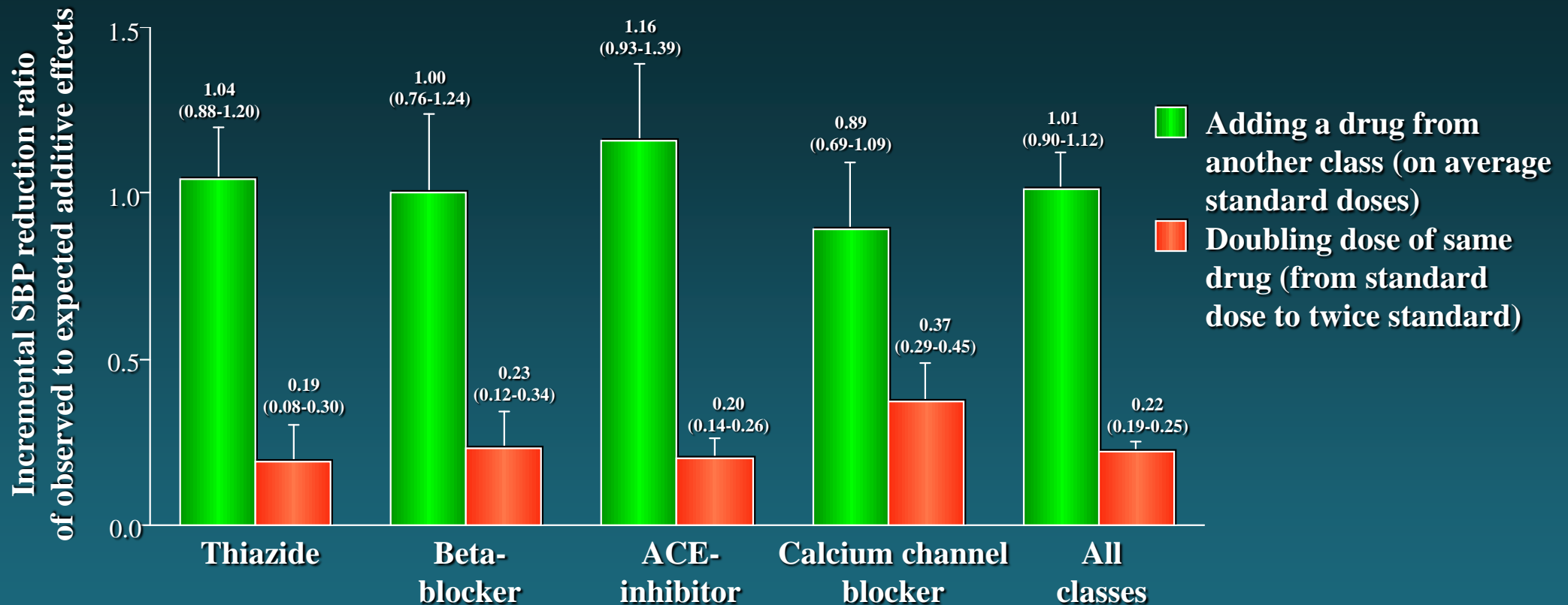


- Pronounced antihypertensive effect
- CV protection
- Optimal tolerability

Selecting Patients Suitable for RAS Blockade with CCB or Diuretic



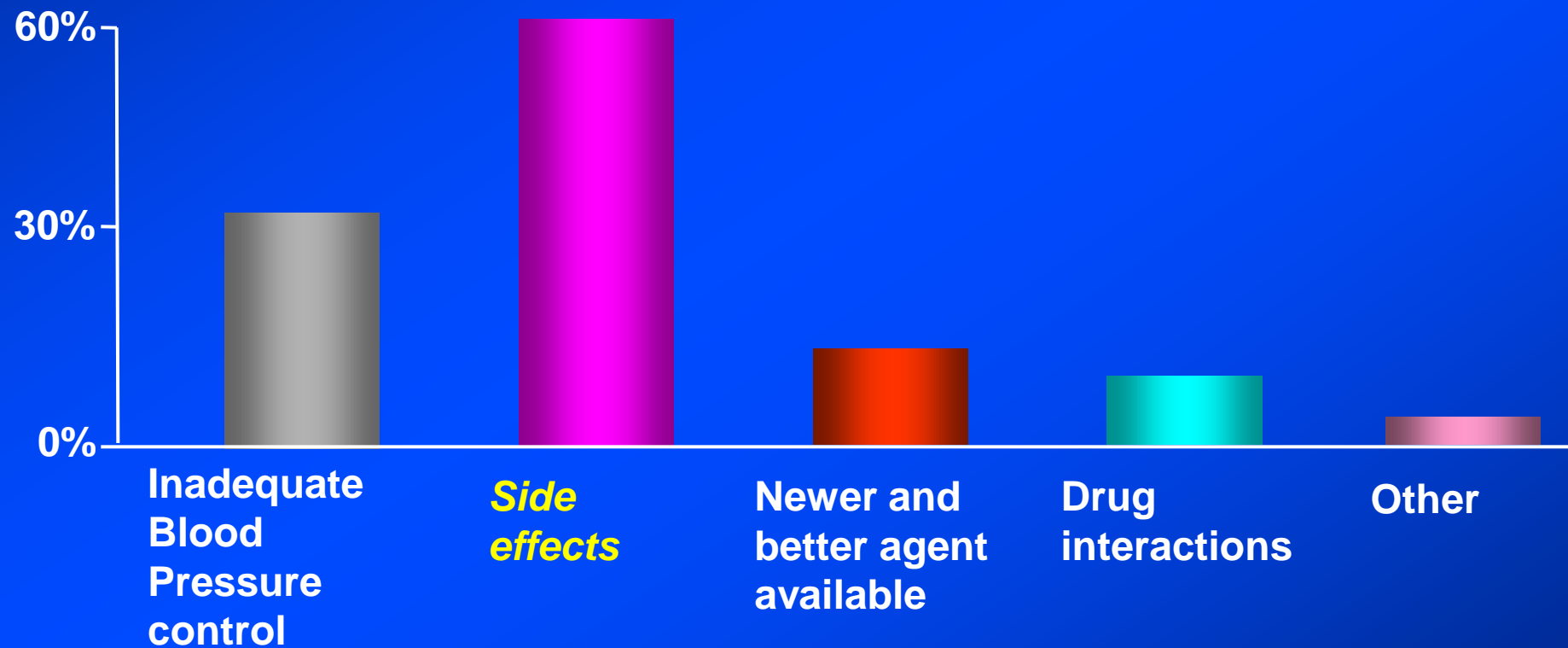
Ratio of observed to expected incremental blood pressure-lowering effects* of adding a drug or doubling the dose according to the class of drug



* The expected incremental effect is the incremental blood pressure reduction of the added (or doubled drug), assuming an additive effect and allowing for the smaller reduction from 1 drug (or dose of 1 drug) given the lower pretreatment blood pressure because of the other

Patterns of hypertension management in Italy

66% discontinuation of the treatment or switching to another drug



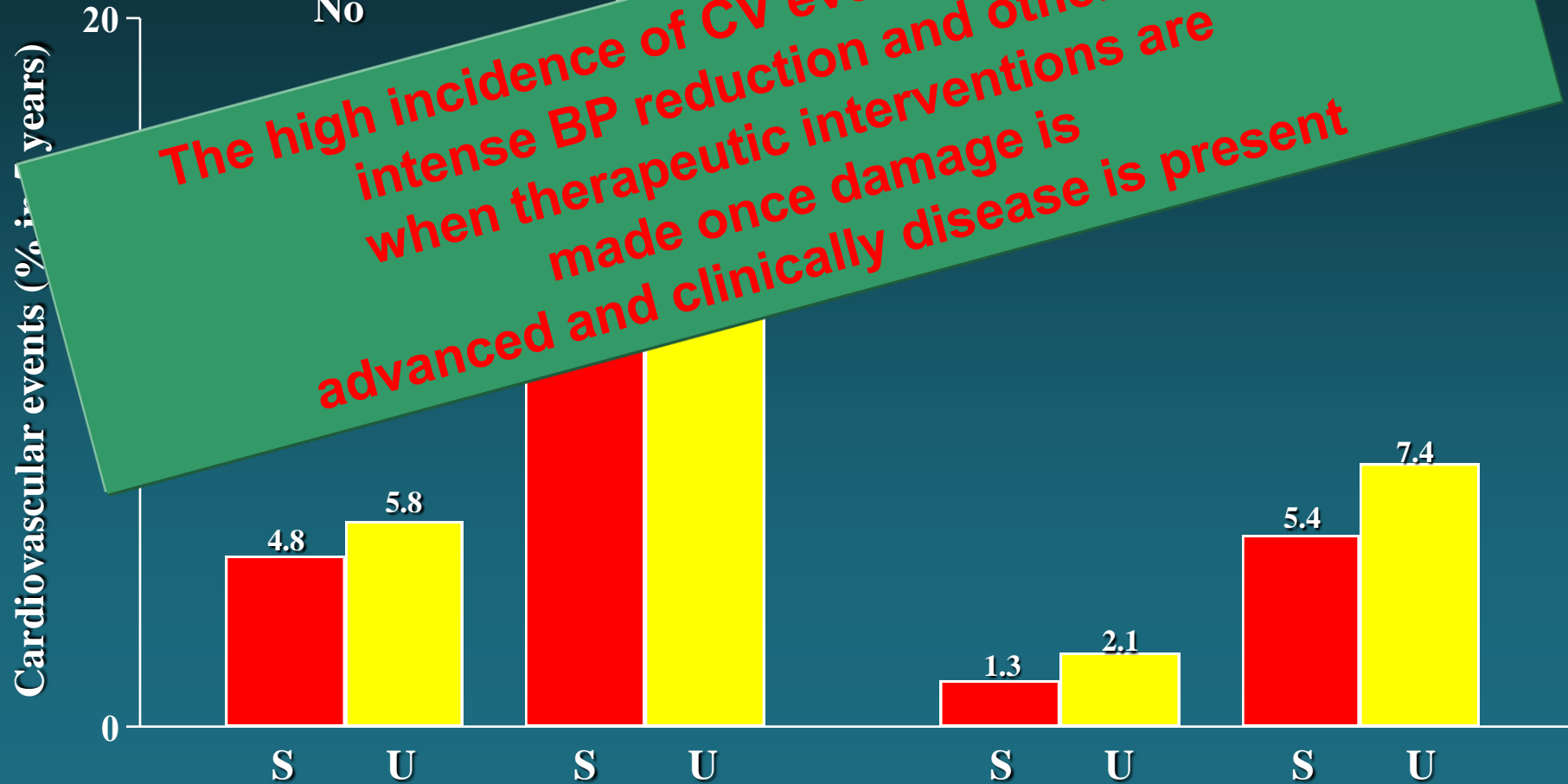


Hypertension Detection and Follow-up Program

A. Total Mortality

Organ Damage

No



The high incidence of CV events persists despite intense BP reduction and other RF, when therapeutic interventions are made once damage is advanced and clinically disease is present