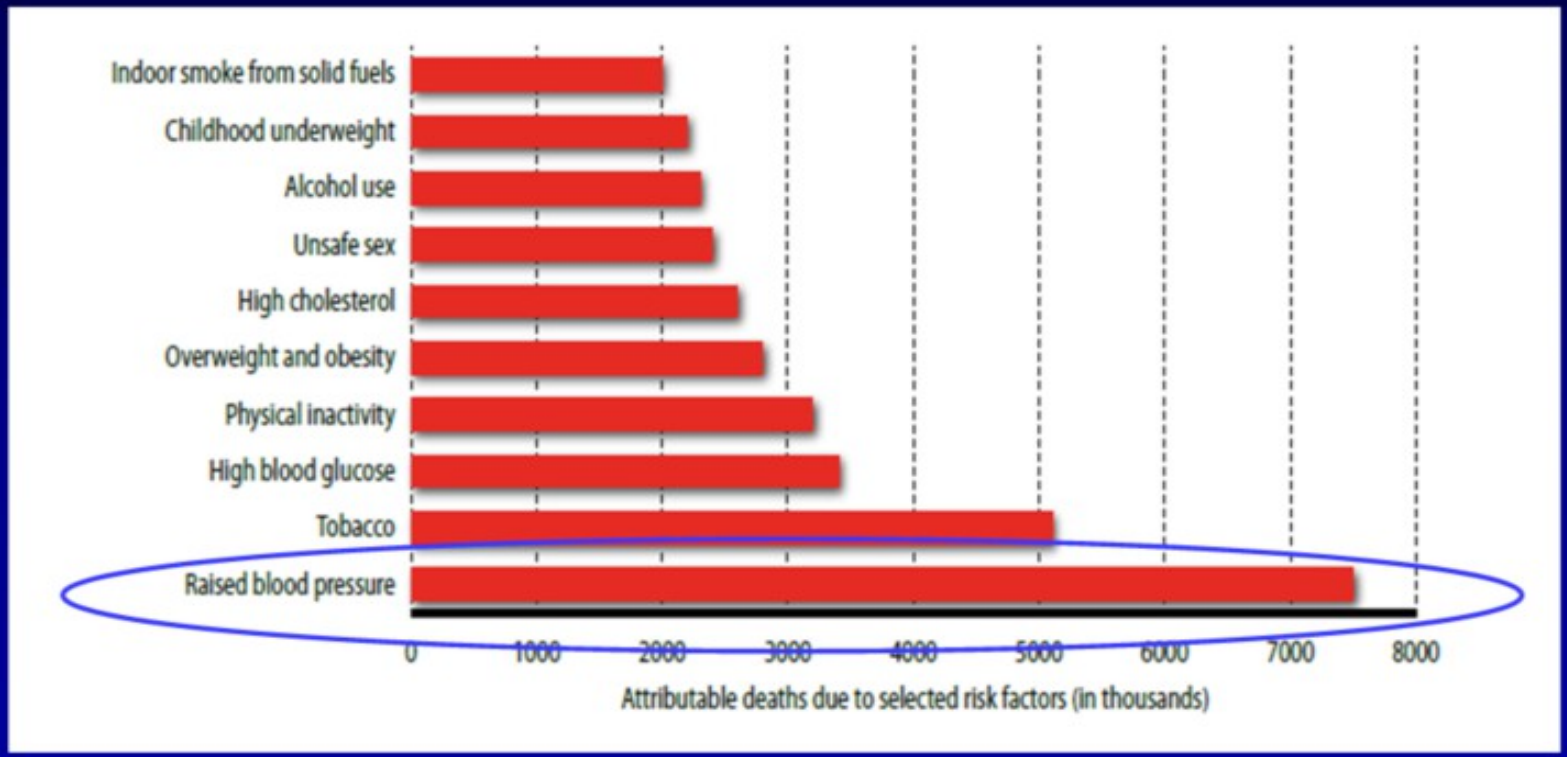
Степен на контрол на хипертонията при инициална терапия

Доц. Иван Груев д.м.

НМТБ”Цар Борис III”

Тихият убиец си остава най-опасен!

Major Risk Factors of Global Mortality



Global Atlas on Cardiovascular Disease Prevention and Control. Mendis S, Puska P, Norrving B editors. World Health Organization, Geneva 2011

Тройният парадокс на хипертонията!

Hypertension even today is a triple paradox which is:

- Easy to diagnose OFTEN remains undetected
- Simple to treat OFTEN remains untreated
- Despite availability of potent drugs, treatment all too OFTEN is ineffective

Правило на половините

100 хипертоници

50 знаят това

50 не знаят

25 лекувани

25 нелекувани

12-13 контролирани

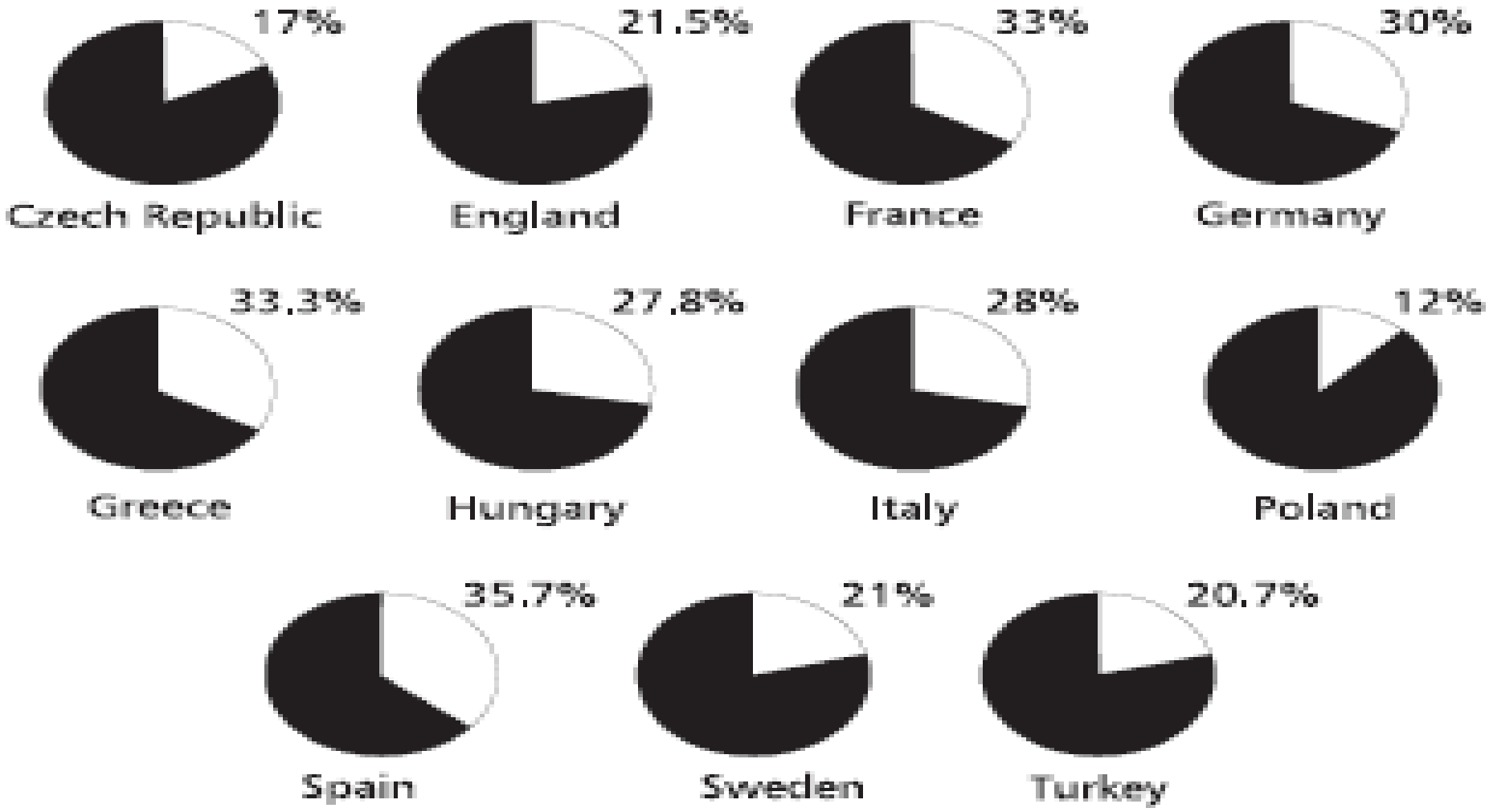
12-13 неконтролирани

European Society of Hypertension Scientific Newsletter:
Update on Hypertension Management

2007; 8: No. 3
revised version

HOW WELL IS HYPERTENSION CONTROLLED IN EUROPE?

Serap Erdine, Head of Hypertension Unit, Cardiology Department, Cerrahpasa School of Medicine, Istanbul University, Istanbul, Turkey



Смъртност от инсулт като показател за степента на конторол на хипертонията

Trends in Stroke Mortality Risk from 1990-2002 by Country group (WHO) in Europe

Age-adjusted stroke mortality rates per 100,000 inhabitants

Group of Countries	Males	Females
Group A (Very low child and adult mortality)	93.9 (75.5-112.3)	129.9 (107.5-153.4)
Group B (Low child and adult mortality)	136.9 (86.8-186.5)	155.3 (108.0-201.9)
Group C (Low child and high adult mortality)	169.5 (138.2-199.7)	235.8 (185.6-283.5)

Mean (95% CI)

Group A: Greece and Portugal had rates twice the group average

Group B: Bulgaria and Romania had the highest rates

Group C: Latvia and Russian Federation had the highest rates

Контрол на хипертонията в САЩ

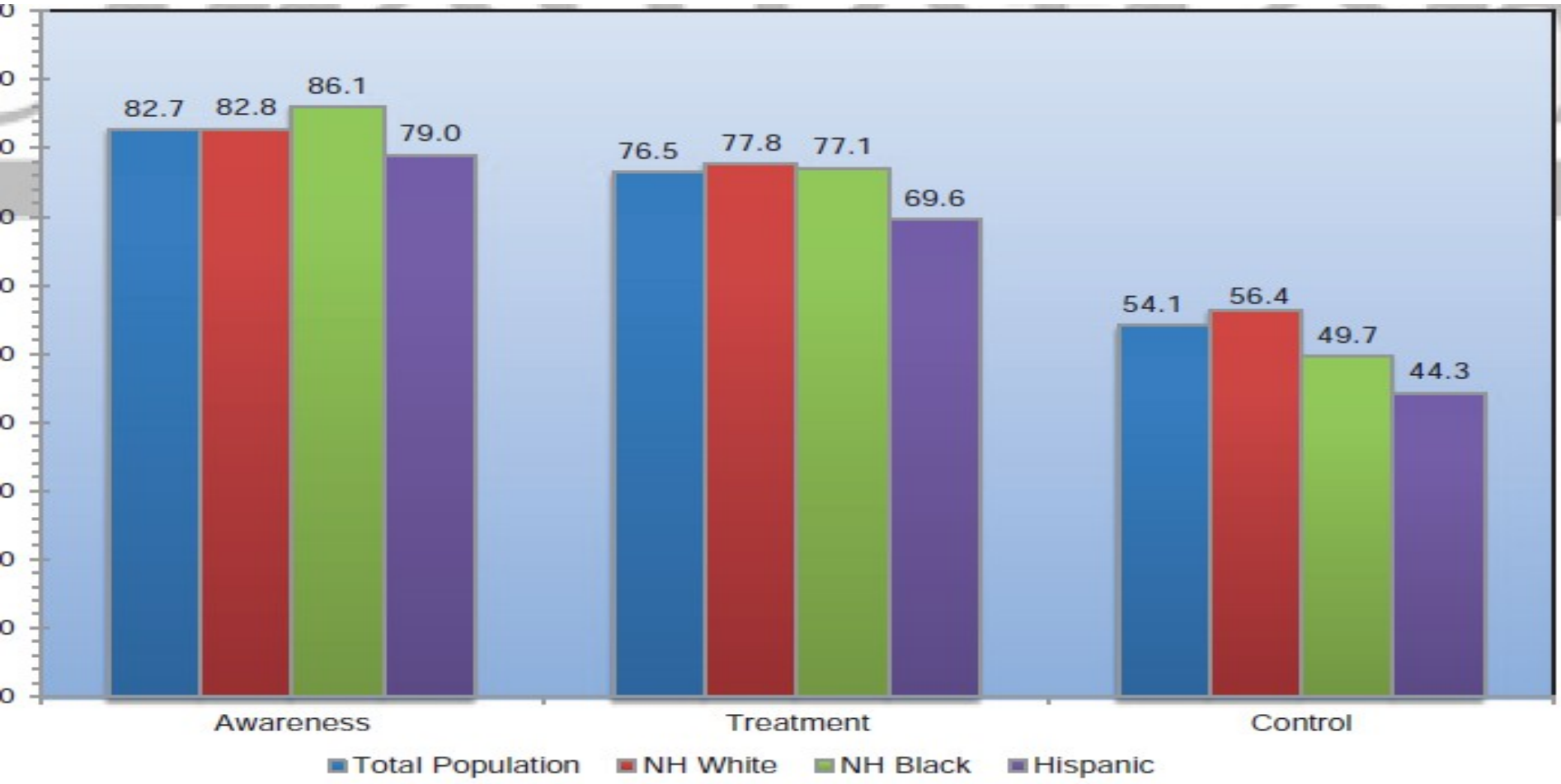
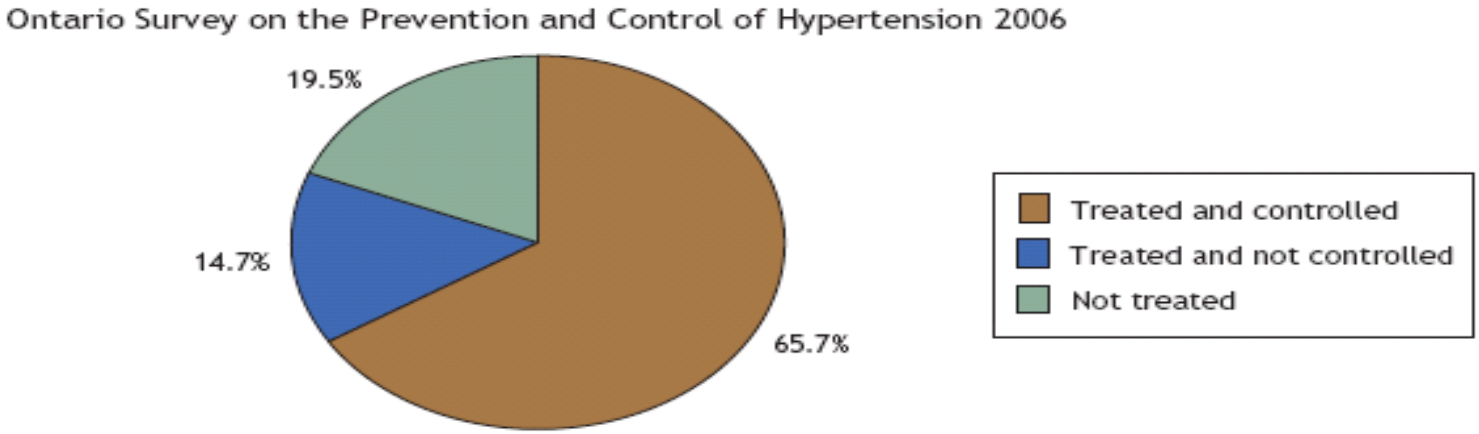
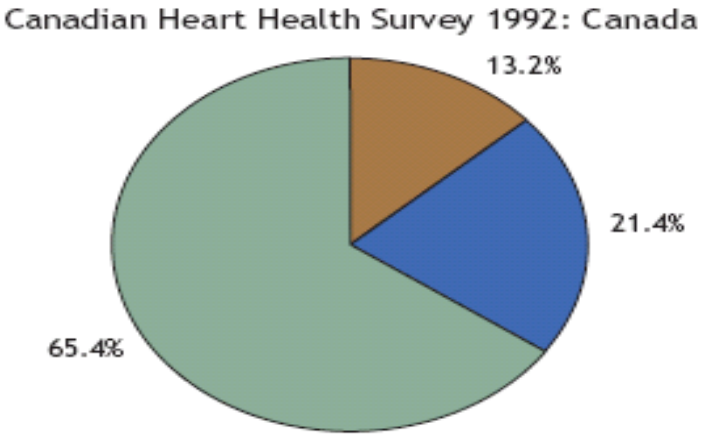


Chart 9-3. Extent of awareness, treatment, and control of high blood pressure by race/ethnicity (National Health and Nutrition Examination Survey: 2007–2012). Hypertension is defined as systolic blood pressure ≥140 mm Hg or diastolic blood pressure ≥90 mm Hg, or if the subject said "yes" to taking antihypertensive medication. NH indicates non-Hispanic. Source: National Center for Health Statistics and National Heart, Lung, and Blood Institute.

Ontario Survey on the Prevalence and Control of Hypertension, 2006





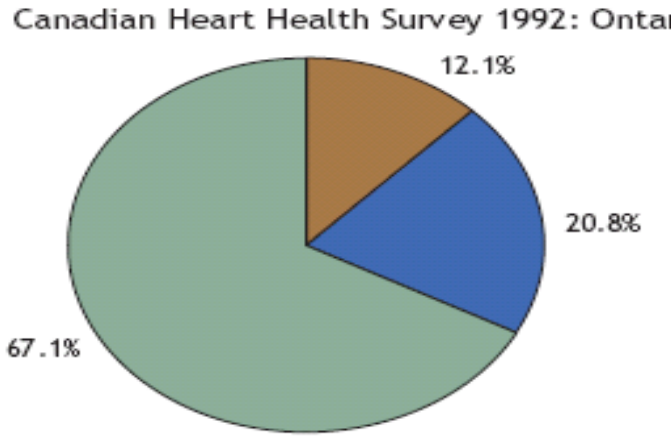


Table 6. Guideline Comparisons of Goal BP and Initial Drug Therapy for Adults With Hypertension

Guideline	Population	Goal BP, mm Hg	Initial Drug Treatment Options
2014 Hypertension guideline	General ≥60 y	<150/90	Nonblack: thiazide-type diuretic, ACEI, ARB, or CCB
	General <60 y	<140/90	Black: thiazide-type diuretic or CCB
	Diabetes	<140/90	Thiazide-type diuretic, ACEI, ARB, or CCB
	CKD	<140/90	ACEI or ARB
ESH/ESC 2013[37]	General nonelderly	<140/90	β-Blocker, diuretic, CCB, ACEI, or ARB
	General elderly <80 y	<150/90	
	General ≥80 y	<150/90	
	Diabetes	<140/85	ACEI or ARB
	CKD no proteinuria	<140/90	ACEI or ARB
	CKD + proteinuria	<130/90	
CHEP 2013[38]	General <80 y	<140/90	Thiazide, β-blocker (age <60y), ACEI (nonblack), or ARB
	General ≥80 y	<150/90	
	Diabetes	<130/80	ACEI or ARB with additional CVD risk ACEI, ARB, thiazide, or DHPCCB without additional CVD risk
	CKD	<140/90	ACEI or ARB
ADA 2013[39]	Diabetes	<140/80	ACEI or ARB
KDIGO 2012[40]	CKD no proteinuria	≤140/90	ACEI or ARB
	CKD + proteinuria	≤130/80	
NICE 2011[41]	General <80 y	<140/90	<55 y: ACEI or ARB
	General ≥80 y	<150/90	≥55 y or black: CCB
ISHIB 2010[42]	Black, lower risk	<135/85	Diuretic or CCB
	Target organ damage or CVD risk	<130/80	

Кога да започнем терапията?

Initiation of lifestyle changes and antihypertensive drug treatment based on total CV risk

Other risk factors (RF), asymptomatic organ damage (OD) or disease	Blood Pressure (mmHg)			
	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 RF	• No BP intervention	• Lifestyle changes for several months • Then add BP drugs targeting <140/90	• Lifestyle changes for several weeks • Then add BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
1-2 RF	• Lifestyle changes • No BP intervention	• Lifestyle changes for several weeks • Then add BP drugs targeting <140/90	• Lifestyle changes for several weeks • Then add BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
≥3 RF	• Lifestyle changes • No BP intervention	• Lifestyle changes for several weeks Then add BP drugs targeting <140/90	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
OD, CKD stage 3 or diabetes	• Lifestyle changes • No BP intervention	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90
Symptomatic CVD, CKD stage ≥4 or diabetes with OD/RFs	• Lifestyle changes • No BP intervention	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • BP drugs targeting <140/90	• Lifestyle changes • Immediate BP drugs targeting <140/90

(In patients with diabetes, the optimal diastolic BP target is 80-85 mmHg)

Eur Heart J, 2013; 34: 2159-2219
J Hypertens, 2013; 31: 1281-1357
Blood Pressure, 2013: 193-278

www.escardio.org/guidelines

ESH European Society of Hypertension

EUROPEAN SOCIETY OF CARDIOLOGY®

Как да започнем терапията?

Адапт. по:
Mancia G. et al, Journal of Hypertension 2013, 31:1281-1357

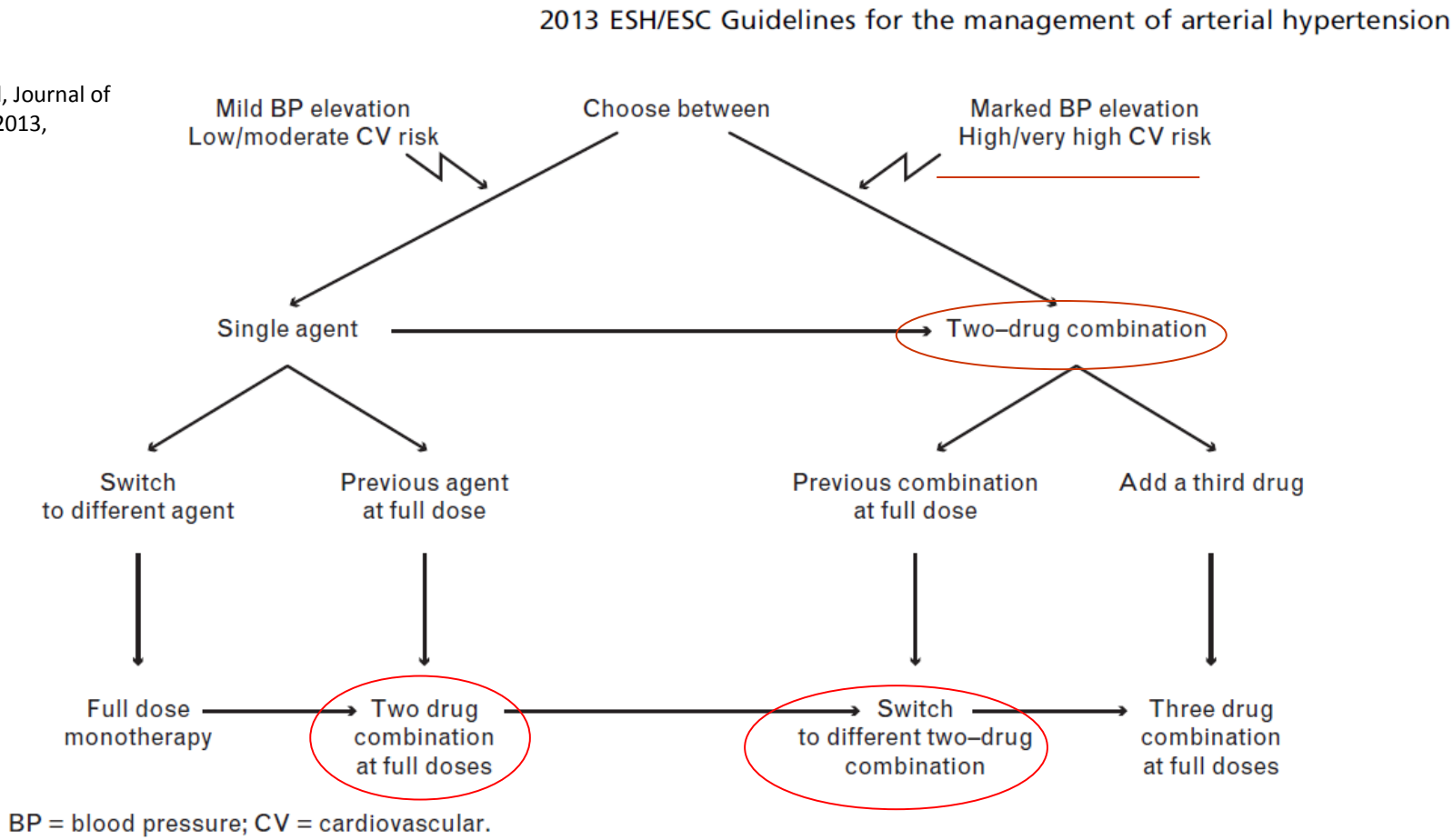
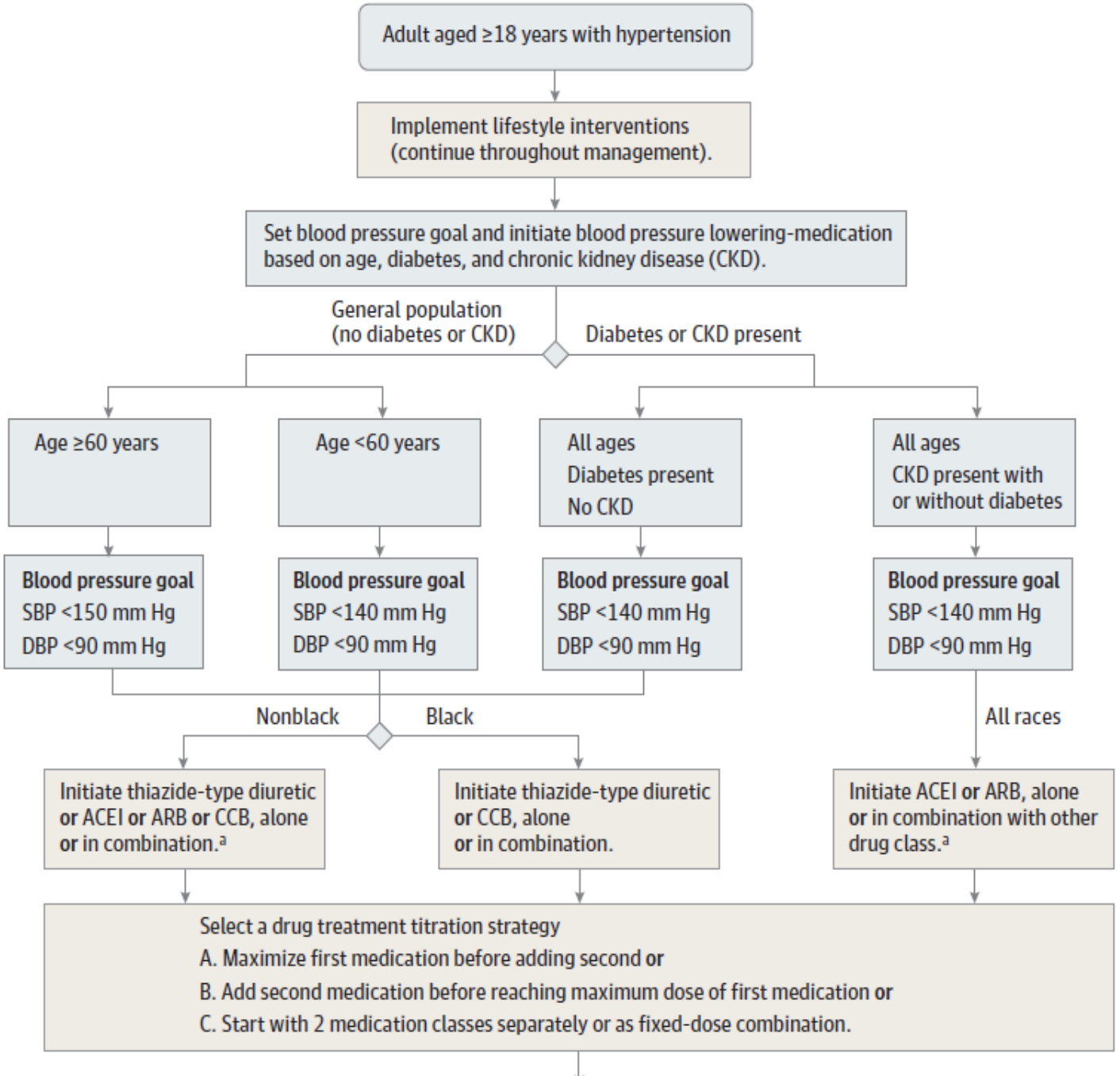


FIGURE 3 Monotherapy vs. drug combination strategies to achieve target BP. Moving from a less intensive to a more intensive therapeutic strategy should be done whenever BP target is not achieved.

Figure. 2014 Hypertension Guideline Management Algorithm



Американски препоръки за инициална терапия

Table 5. Strategies to Dose Antihypertensive Drugs

Strategy	Description	Details
A	Start one drug, titrate to maximum dose, and then add a second drug	If goal BP is not achieved with the initial drug, titrate the dose of the initial drug up to the maximum recommended dose to achieve goal BP If goal BP is not achieved with the use of one drug despite titration to the maximum recommended dose, add a second drug from the list (thiazide-type diuretic, CCB, ACEI, or ARB) and titrate up to the maximum recommended dose of the second drug to achieve goal BP If goal BP is not achieved with 2 drugs, select a third drug from the list (thiazide-type diuretic, CCB, ACEI, or ARB), avoiding the combined use of ACEI and ARB. Titrate the third drug up to the maximum recommended dose to achieve goal BP
B	Start one drug and then add a second drug before achieving maximum dose of the initial drug	Start with one drug then add a second drug before achieving the maximum recommended dose of the initial drug, then titrate both drugs up to the maximum recommended doses of both to achieve goal BP If goal BP is not achieved with 2 drugs, select a third drug from the list (thiazide-type diuretic, CCB, ACEI, or ARB), avoiding the combined use of ACEI and ARB. Titrate the third drug up to the maximum recommended dose to achieve goal BP
C	Begin with 2 drugs at the same time, either as 2 separate pills or as a single pill combination	Initiate therapy with 2 drugs simultaneously, either as 2 separate drugs or as a single pill combination. Some committee members recommend starting therapy with ≥2 drugs when SBP is >160 mm Hg and/or DBP is >100 mm Hg, or if SBP is >20 mm Hg above goal and/or DBP is >10 mm Hg above goal. If goal BP is not achieved with 2 drugs, select a third drug from the list (thiazide-type diuretic, CCB, ACEI, or ARB), avoiding the combined use of ACEI and ARB. Titrate the third drug up to the maximum recommended dose.

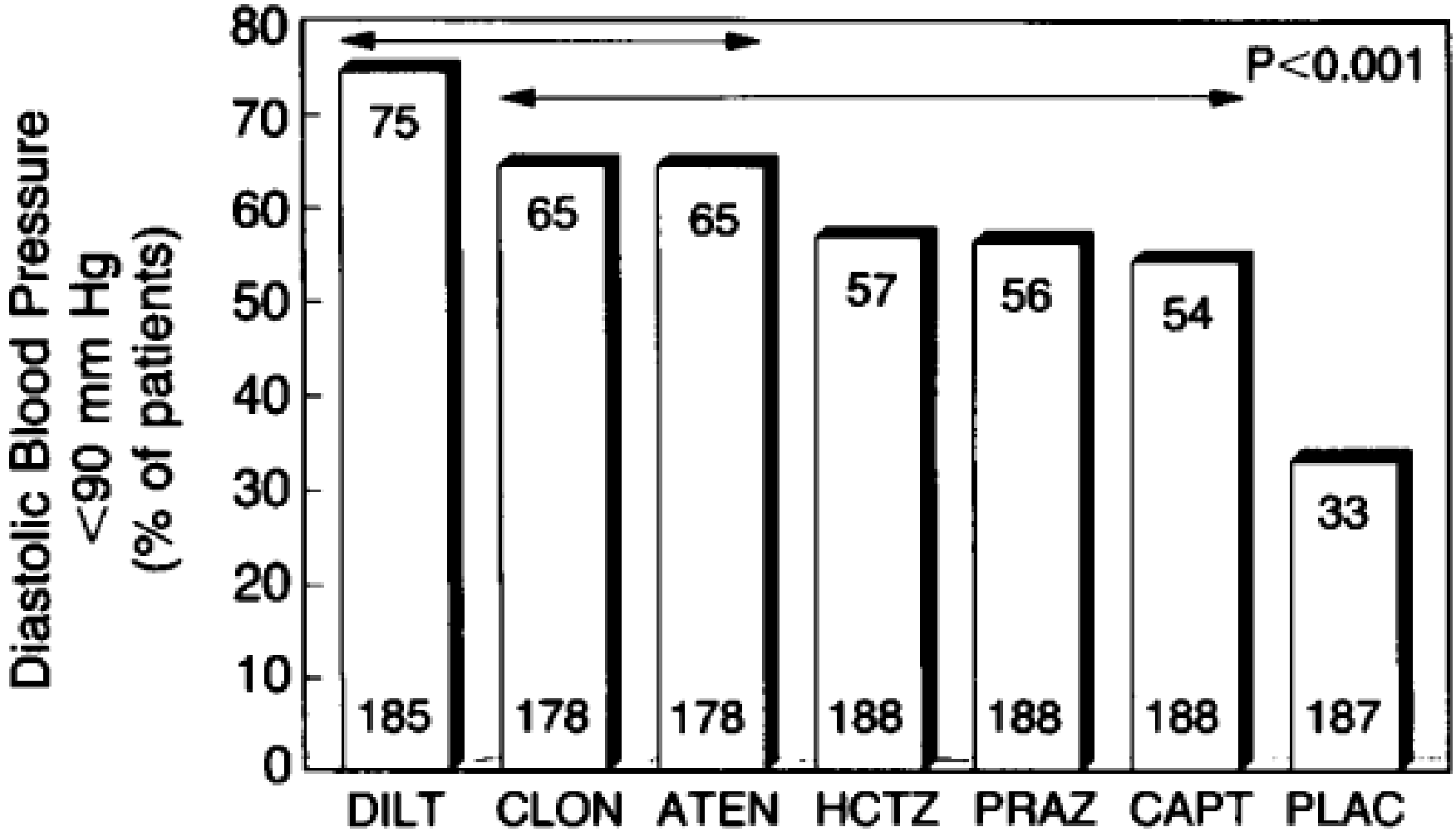
Abbreviations: ACEI, angiotensin-converting enzyme; ARB, angiotensin receptor blocker; BP, blood pressure; CCB, calcium channel blocker; DBP, diastolic blood pressure; SBP, systolic blood pressure.

SINGLE-DRUG THERAPY FOR HYPERTENSION IN MEN

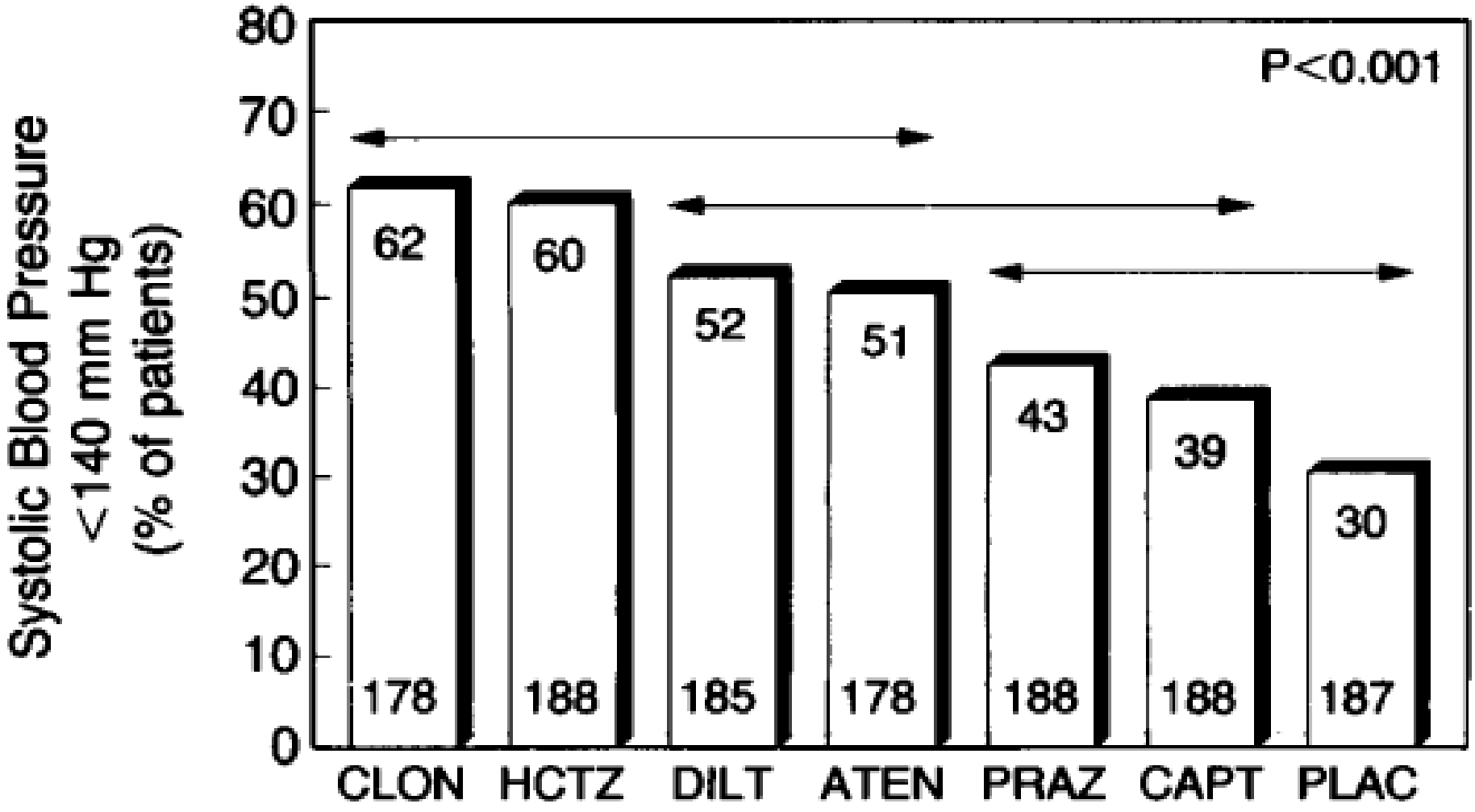
A Comparison of Six Antihypertensive Agents with Placebo

BARRY J. MATERSON, M.D., DOMENIC J. REDA, M.S., WILLIAM C. CUSHMAN, M.D., BARRY M. MASSIE, M.D., EDWARD D. FREIS, M.D., MAHENDR S. KOCHAR, M.D., ROBERT J. HAMBURGER, M.D., CAROL FYE, R.PH., M.S., RAJ LAKSHMAN, PH.D., JOHN GOTTDIENER, M.D., ELI A. RAMIREZ, M.D., AND WILLIAM G. HENDERSON, PH.D., FOR THE DEPARTMENT OF VETERANS AFFAIRS COOPERATIVE STUDY GROUP ON ANTIHYPERTENSIVE AGENTS*

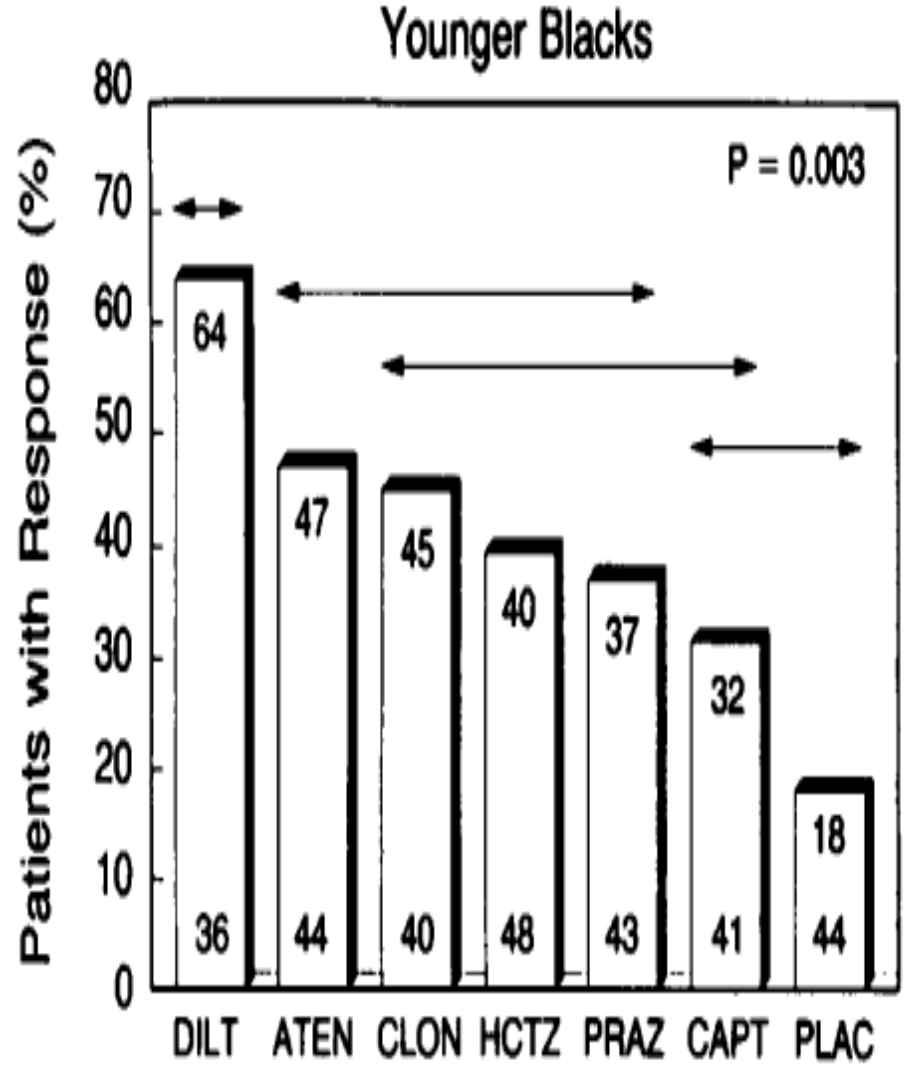
Степен на контрол на ДАН

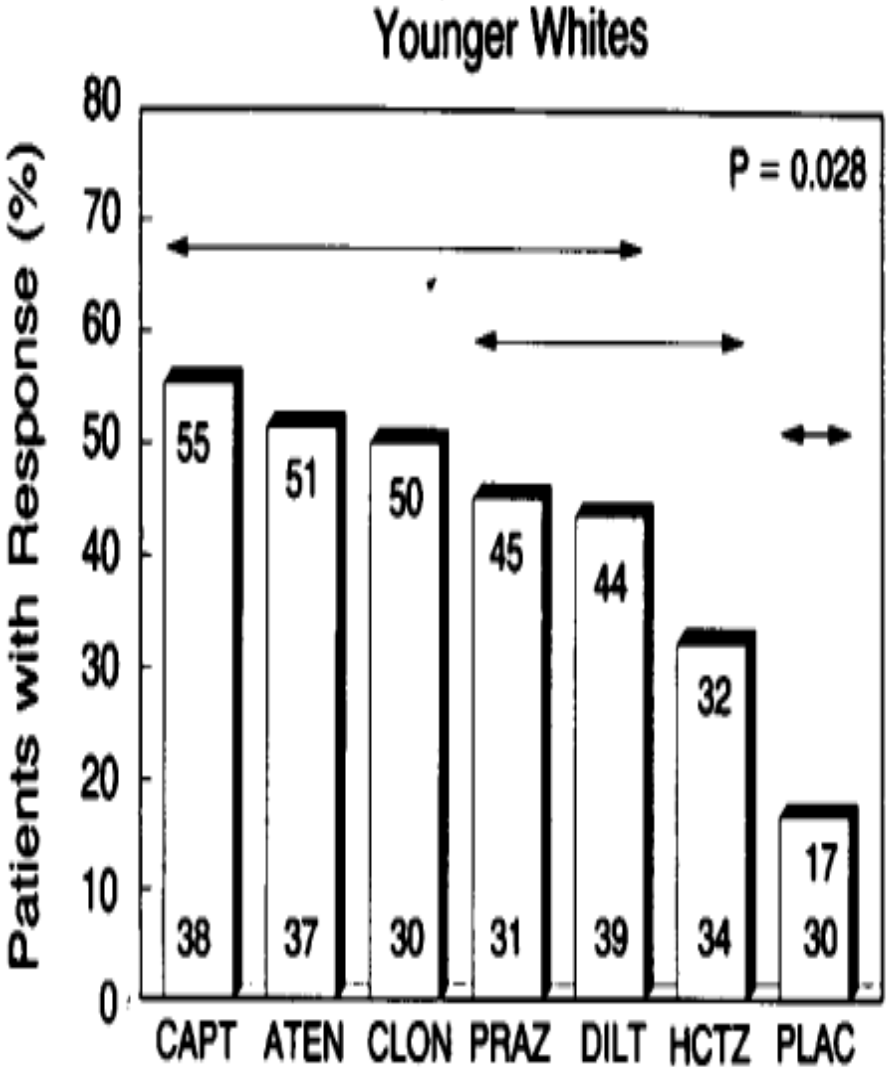


Степен на контрол на САН

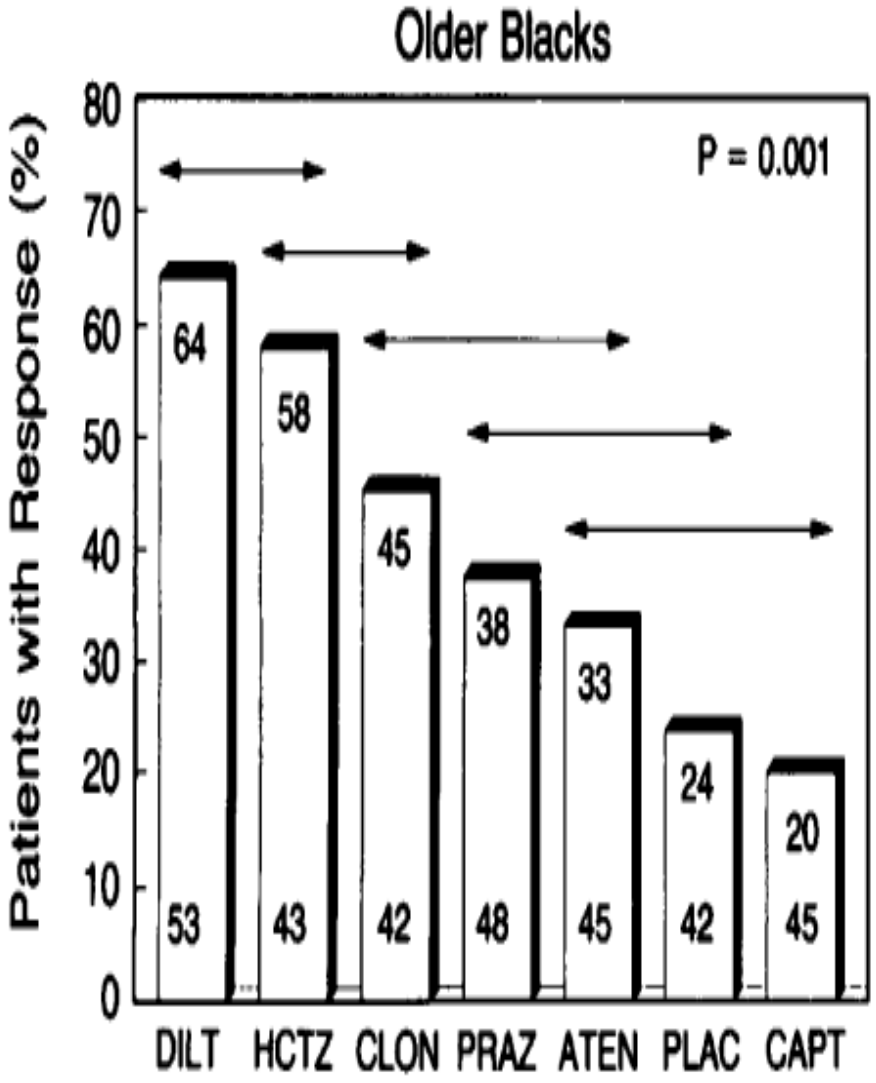


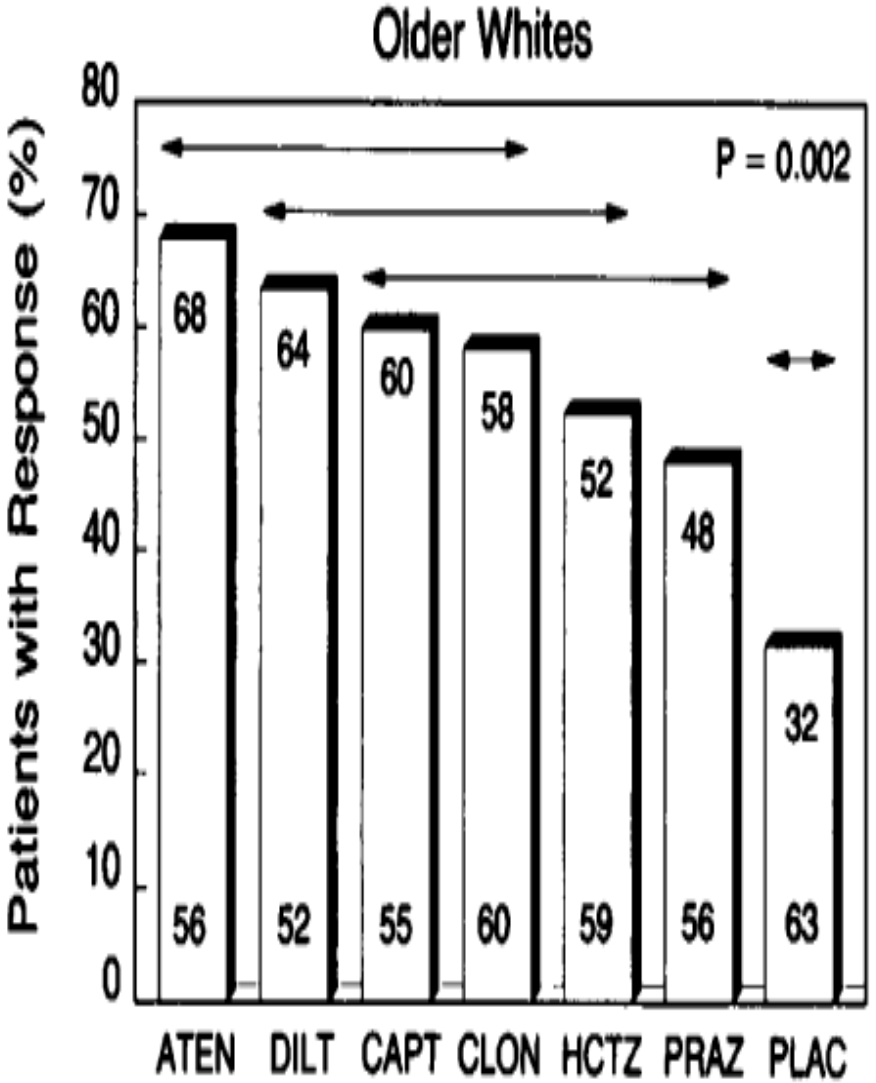
Степен на контрол при млади пациенти





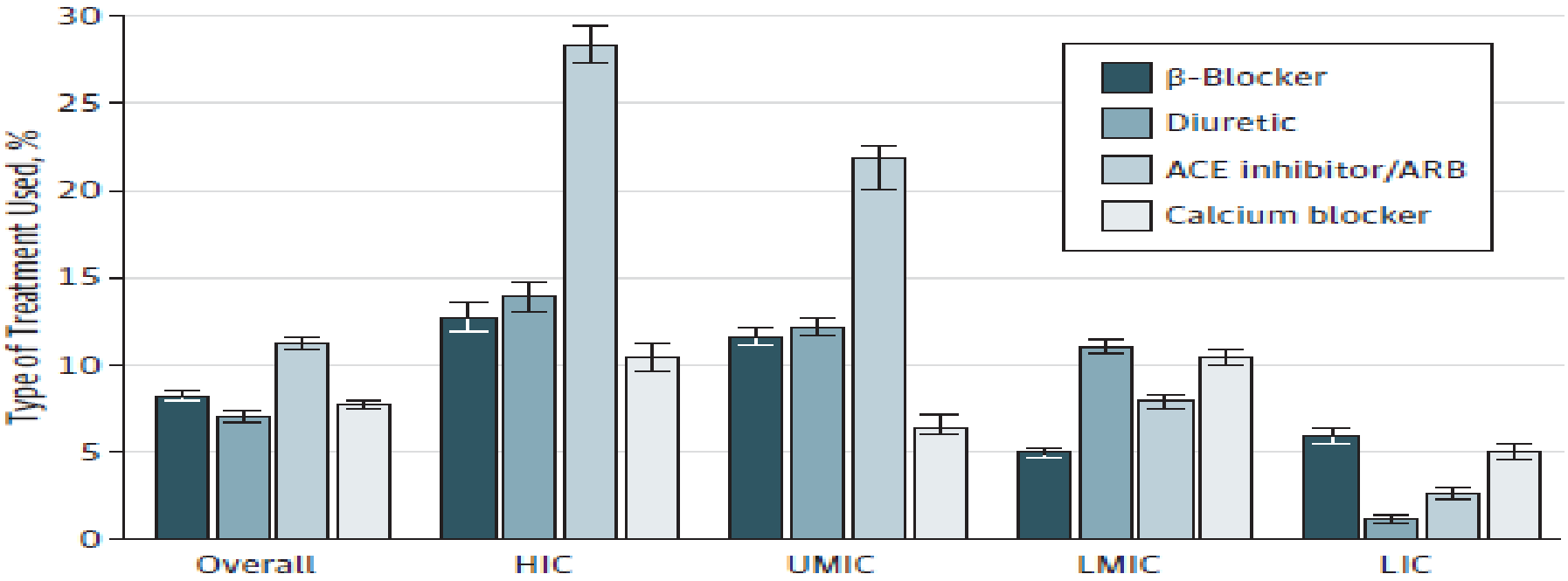
Степен на контрол при възрастни





Видове медикаменти, използвани за инициална терапия в страни с различни нива на доходите

Figure 2. Types of Treatments Used for Hypertension in Countries Overall and by Income Status



Prevalence, Awareness, Treatment, and Control of Hypertension in Rural and Urban Communities in High-, Middle-, and Low-Income Countries

Clara K. Chow, PhD; Koon K. Teo, PhD; Sumathy Rangarajan, MSc; Shofiqul Islam, MSc; Rajeev Gupta, PhD; Alvaro Avezum, MD; Ahmad Bahonar, MPH; Jephat Chifamba, PhD; Gilles Dagenais, MD; Rafael Diaz, MD; Khawar Kazmi, MD; Fernando Lanas, MD; Li Wei, PhD; Patricio Lopez-Jaramillo, MD, PhD; Lu Fanghong, MD; Noor Hassim Ismail, MSc; Thandi Puoane, Dr PH; Annika Rosengren, MD; Andrzej Szuba, MD; Ahmet Temizhan, MD; Andy Wielgosz, MD; Rita Yusuf, PhD; Afzalhussein Yusufali, MD; Martin McKee, DSc; Lisheng Liu, MD; Prem Mony, MD; Salim Yusuf, DPhil;
for the PURE (Prospective Urban Rural Epidemiology) Study investigators

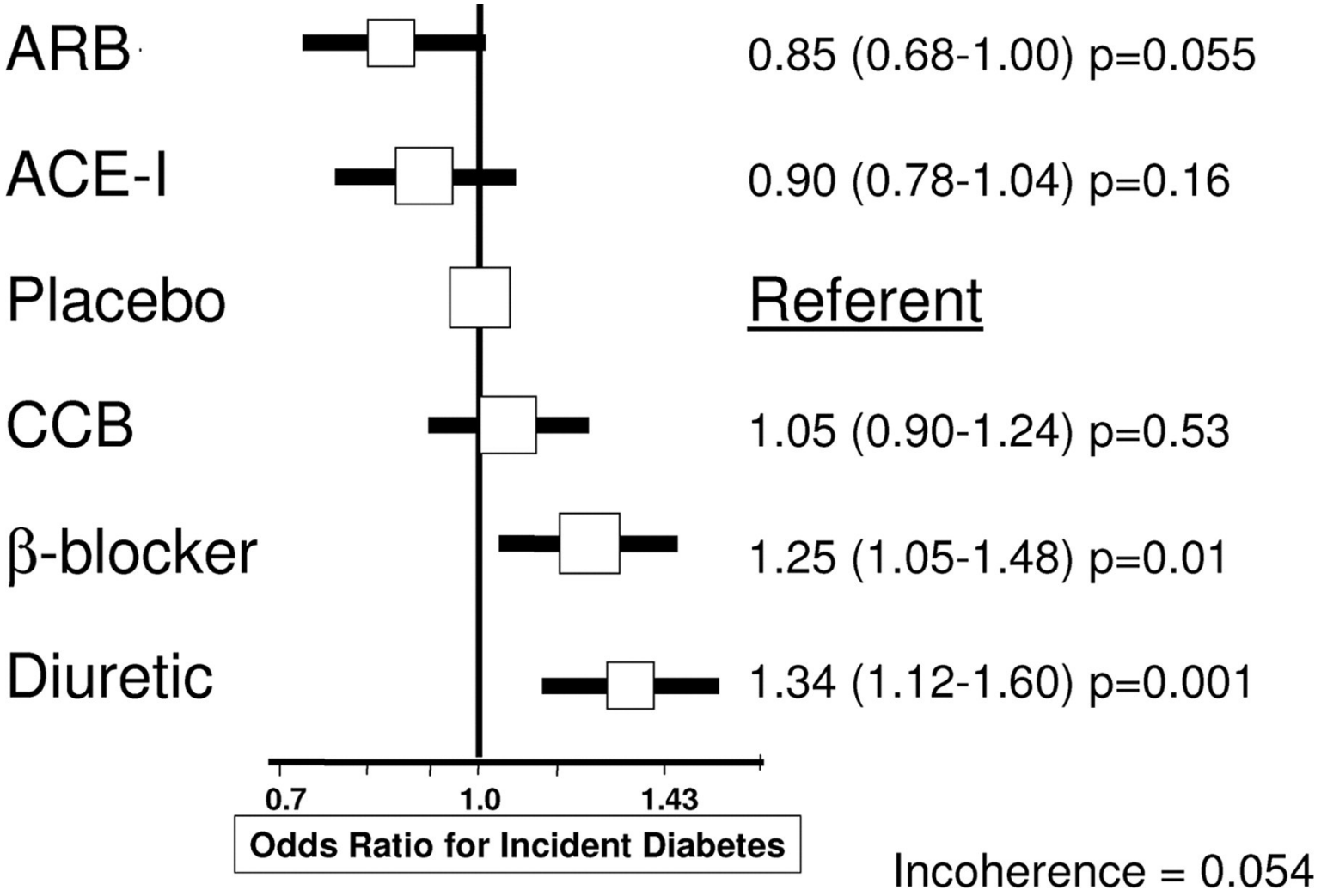
From: **Are β-Blockers Efficacious as First-line Therapy for Hypertension in the Elderly? A Systematic Review**

JAMA. 1998;279(23):1903-1907. doi:10.1001/jama.279.23.1903

Table 2.—Response Rate to Antihypertensive Treatment in Elderly Patients With Hypertension

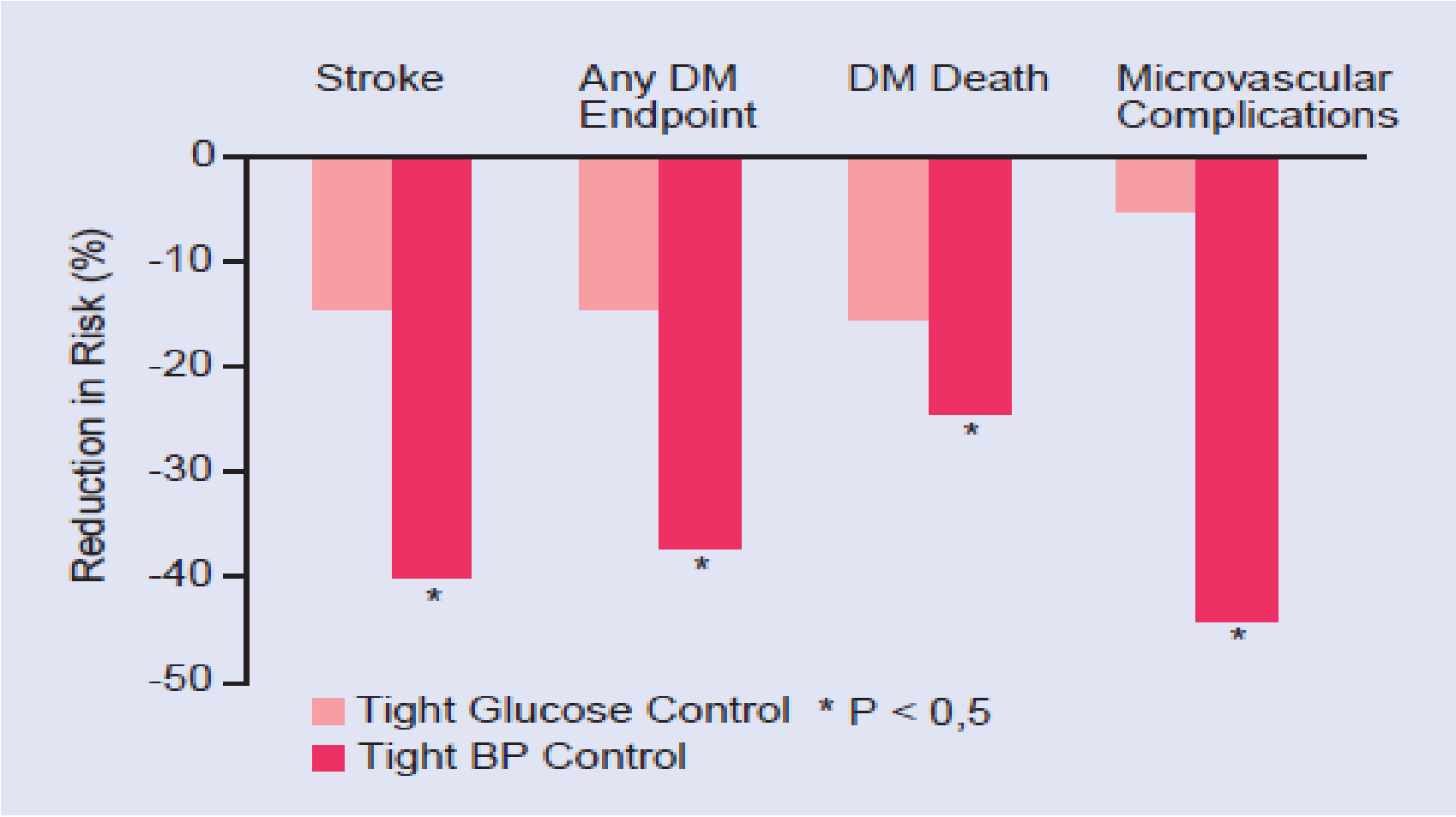
Study	No. of Patients	First Drug	Response Rate, %
	Diuretics		
Kuramoto et al,[5] 1981	44	Thiazide	79
European Working Party on High Blood Pressure in the Elderly,[7] 1985	416	Hydrochlorothiazide and triamterene	65
Systolic Hypertension in the Elderly Program Pilot,[10] 1989	443	Chlorthalidone	88
Systolic Hypertension in the Elderly Program,[11] 1991	2365	Chlorthalidone	46
Swedish Trial in Old Patients,[17] 1991	246	Hydrochlorothiazide and amiloride hydrochloride	60
Medical Research Council Working Party,[13] 1992	1081	Hydrochlorothiazide and amiloride hydrochloride	62
	β-Blockers		
Coope et al,[9] 1986	419	Atenolol	33
Swedish Trial in Old Patients,[17] 1991	219	Metoprolol	22
Swedish Trial in Old Patients,[17] 1991	180	Atenolol	32
Swedish Trial in Old Patients,[17] 1991	120	Pindolol	28
Medical Research Council Working Party,[13] 1992	1102	Atenolol	48

Figure 6. Risk of new-onset diabetes mellitus with antihypertensive treatment.



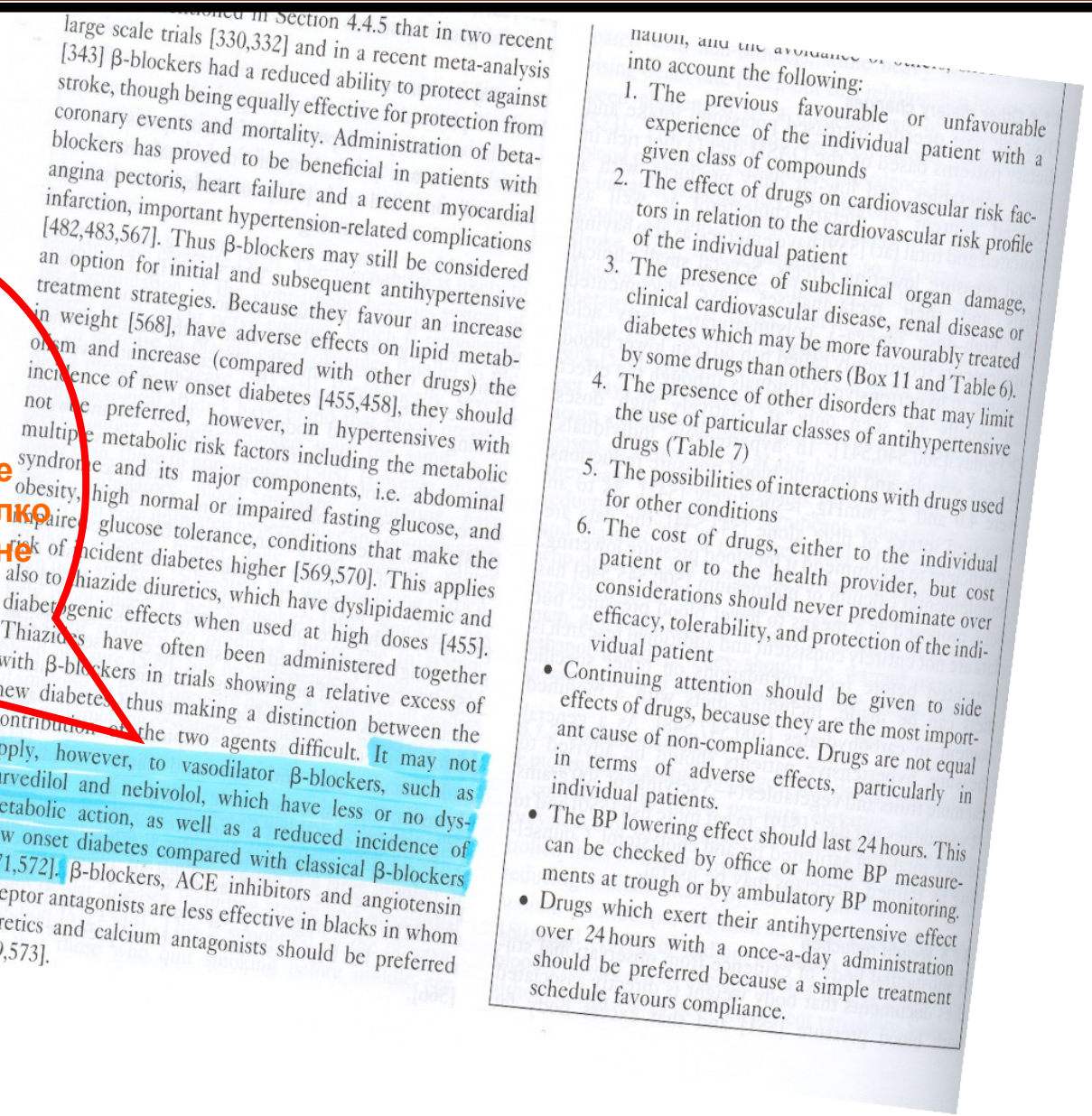
Messerli F H et al. Circulation. 2008;117:2706-2715

Макар че ,контролът на АН е по-важен от контрола на гликемията



2007-2013 ESH/ESC Guidelines

... вазодилатативните бета-блокери като carvedilol и nebivolol, в сравнение с класическите бета-блокери имат по-малко метаболитни ефекти или не оказват такива, както и намаляват честотата на новопоявил се диабет.



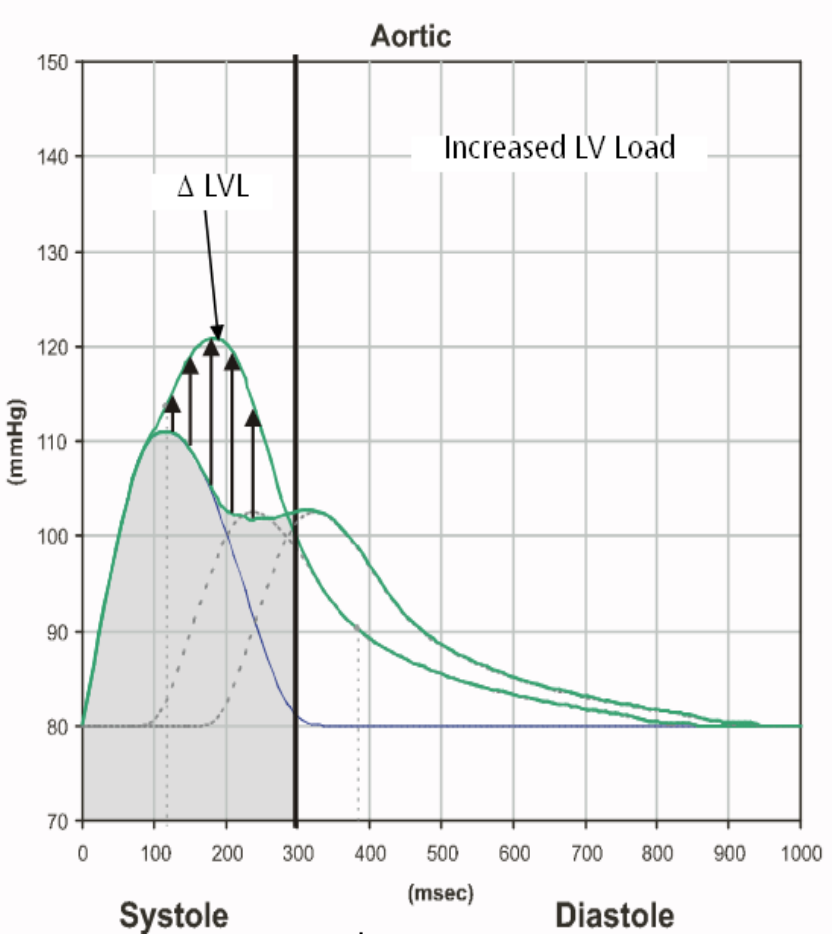
...described in Section 4.4.5 that in two recent large scale trials [330,332] and in a recent meta-analysis [343] β-blockers had a reduced ability to protect against stroke, though being equally effective for protection from coronary events and mortality. Administration of beta-blockers has proved to be beneficial in patients with angina pectoris, heart failure and a recent myocardial infarction, important hypertension-related complications [482,483,567]. Thus β-blockers may still be considered an option for initial and subsequent antihypertensive treatment strategies. Because they favour an increase in weight [568], have adverse effects on lipid metabolism and increase (compared with other drugs) the incidence of new onset diabetes [455,458], they should not be preferred, however, in hypertensives with multiple metabolic risk factors including the metabolic syndrome and its major components, i.e. abdominal obesity, high normal or impaired fasting glucose, and impaired glucose tolerance, conditions that make the risk of incident diabetes higher [569,570]. This applies also to thiazide diuretics, which have dyslipidaemic and diabetogenic effects when used at high doses [455]. Thiazides have often been administered together with β-blockers in trials showing a relative excess of new diabetes, thus making a distinction between the contribution of the two agents difficult. It may not apply, however, to vasodilator β-blockers, such as carvedilol and nebivolol, which have less or no dysmetabolic action, as well as a reduced incidence of new onset diabetes compared with classical β-blockers [571,572]. β-blockers, ACE inhibitors and angiotensin receptor antagonists are less effective in blacks in whom diuretics and calcium antagonists should be preferred [299,573].

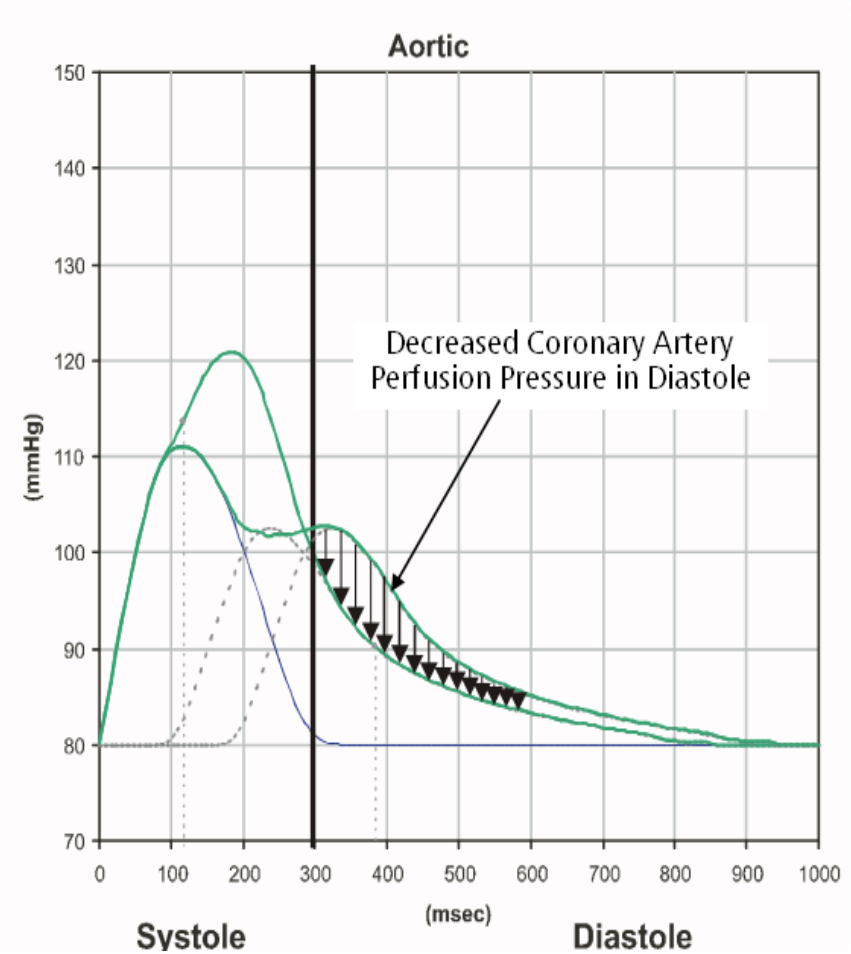
...nation, and the avoidance of ..., into account the following:

1. The previous favourable or unfavourable experience of the individual patient with a given class of compounds
2. The effect of drugs on cardiovascular risk factors in relation to the cardiovascular risk profile of the individual patient
3. The presence of subclinical organ damage, clinical cardiovascular disease, renal disease or diabetes which may be more favourably treated by some drugs than others (Box 11 and Table 6).
4. The presence of other disorders that may limit the use of particular classes of antihypertensive drugs (Table 7)
5. The possibilities of interactions with drugs used for other conditions
6. The cost of drugs, either to the individual patient or to the health provider, but cost considerations should never predominate over efficacy, tolerability, and protection of the individual patient

- Continuing attention should be given to side effects of drugs, because they are the most important cause of non-compliance. Drugs are not equal in terms of adverse effects, particularly in individual patients.
- The BP lowering effect should last 24 hours. This can be checked by office or home BP measurements at trough or by ambulatory BP monitoring.
- Drugs which exert their antihypertensive effect over 24 hours with a once-a-day administration should be preferred because a simple treatment schedule favours compliance.

Не всички бета блокери са еднакви: Вазодилататативните бета блокери не повишават централното аортно налягане, за разлика от Атенолол!



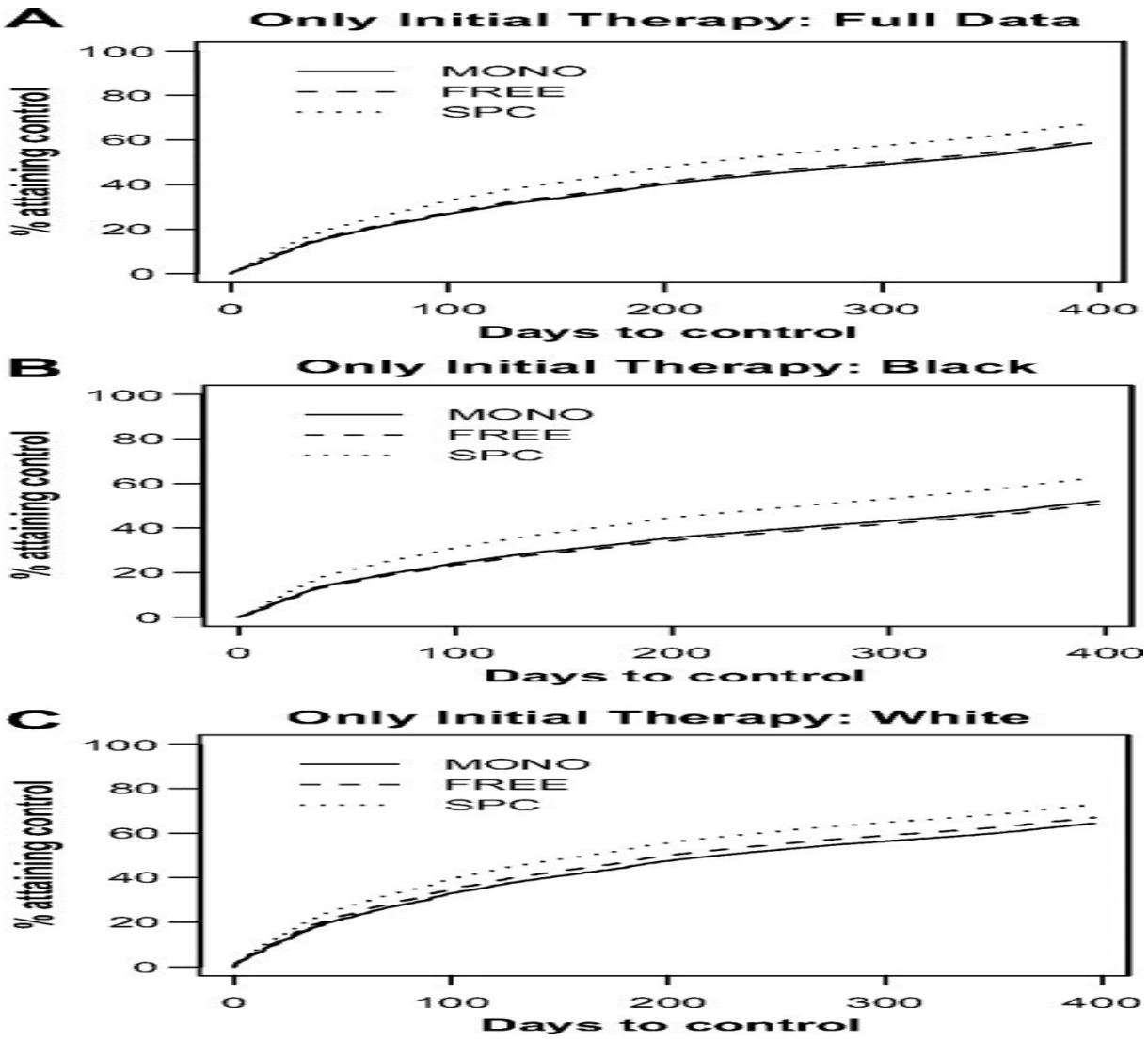


At Cor Medical, Sidney, Australia

Initial monotherapy and combination therapy and hypertension control the first year

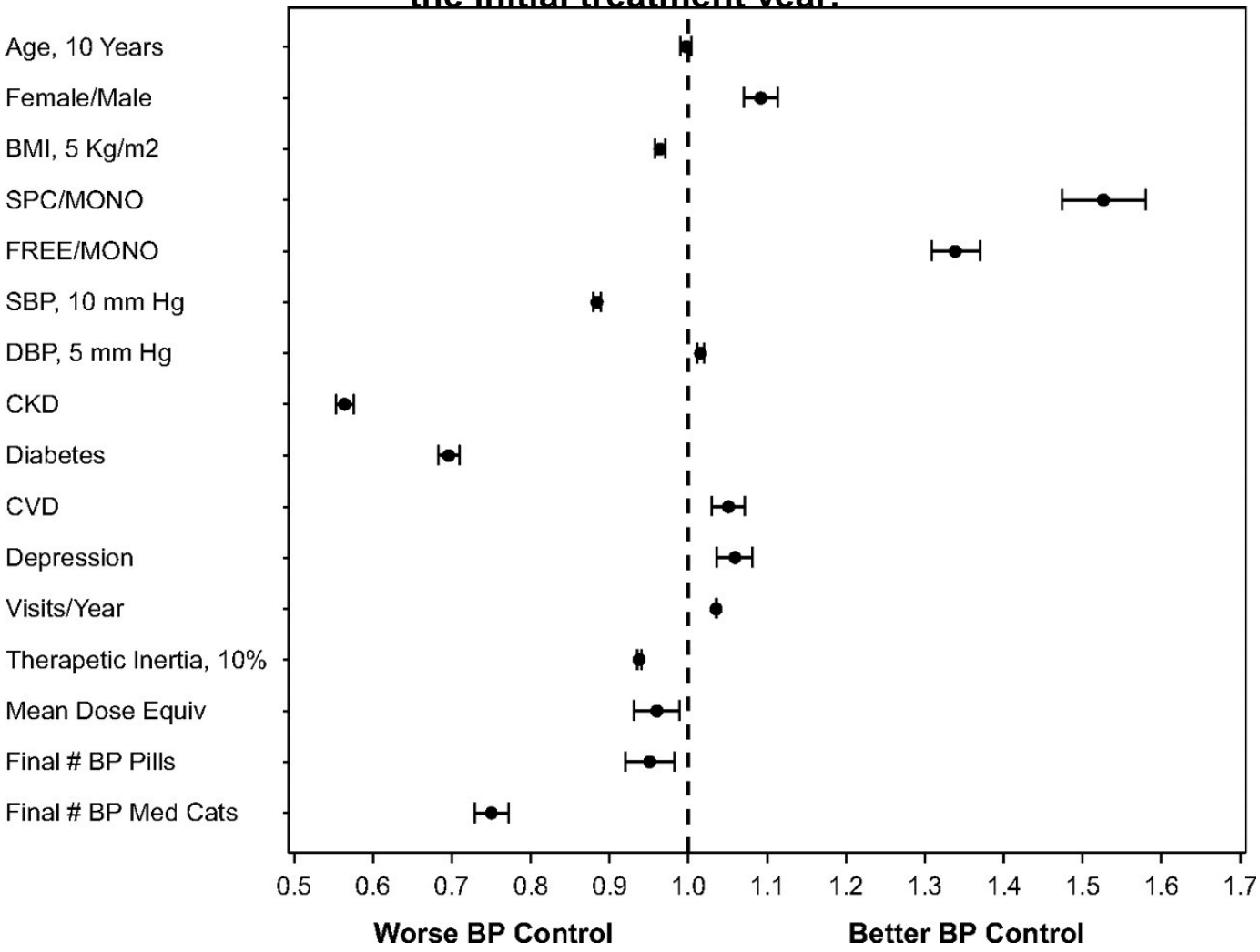
Egan BM, Bandyopadhyay D, Shaftman SR, Wagner CS, Zhao Y, Yu-Isenberg KS. *Hypertension*. 2012;59:1124-1131.

Процент на контрол на хипертонията при инициална терапия с монотерапия, свободна и фиксирана комбинация



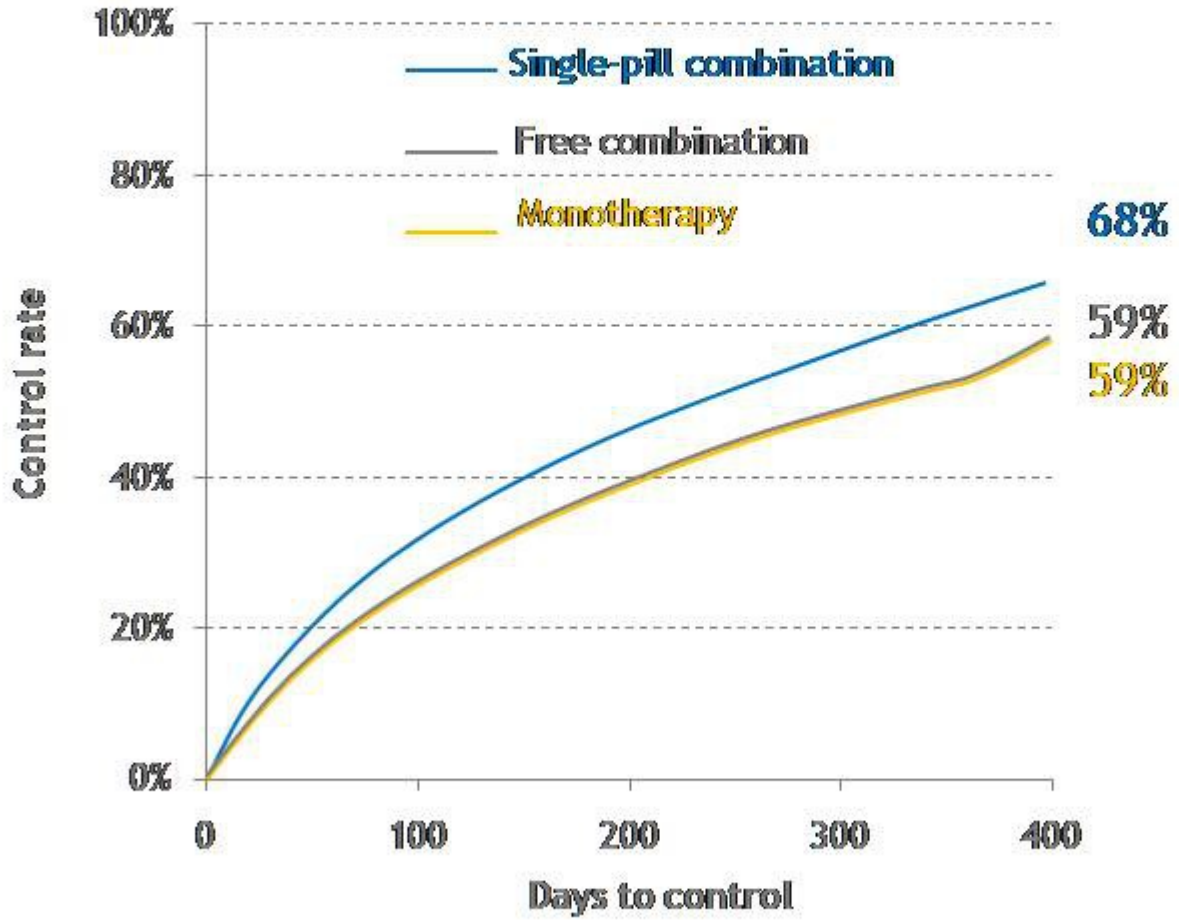
Egan B M et al. Hypertension. 2012;59:1124-1131

Multivariable hazard ratios and 95% CIs (forest plots) are provided based on the probability of obtaining blood pressure (BP) control in previously untreated hypertensive patients during the initial treatment year.



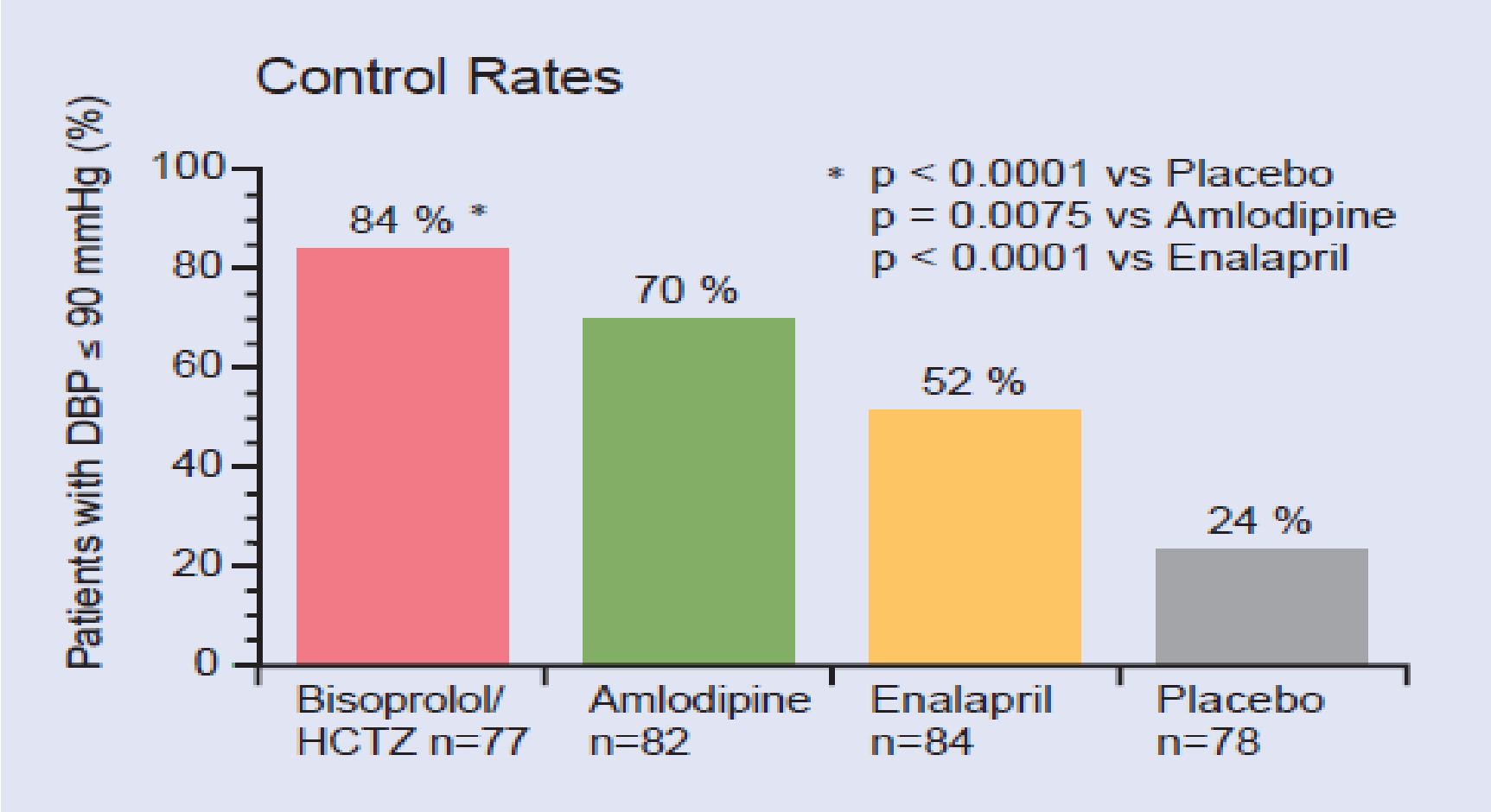
Egan B M et al. Hypertension. 2012;59:1124-1131

Single-pill combination better than free combination

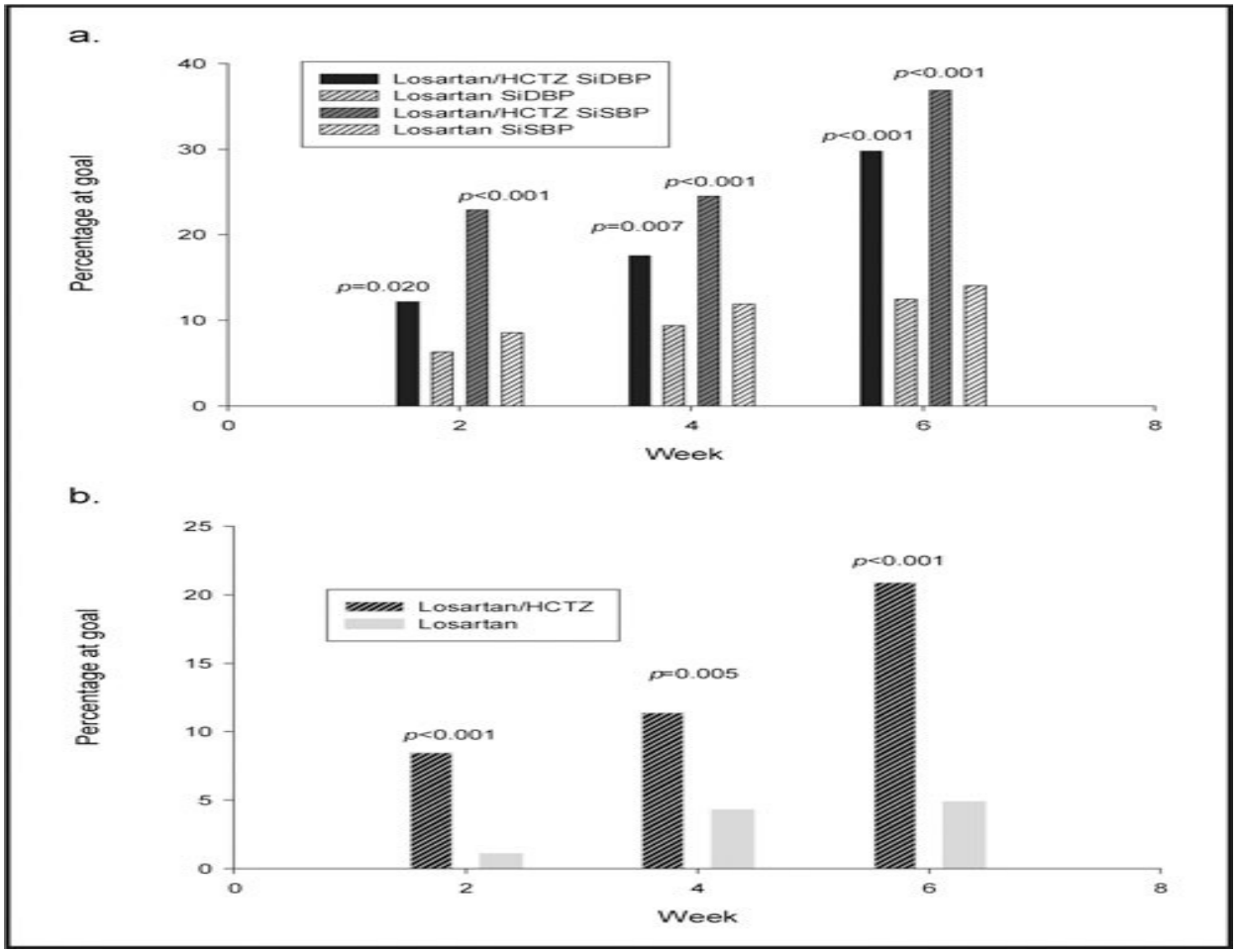


Egan BM, Bandyopadhyay D, Shaftman SR, Wagner CS, Zhao Y, Yu-Isenberg KS. *Hypertension*. 2012;59:1124-1131.

Дори комбинацията от бета блокер и диуретик постига по-добра степен на кантрол от монотерапията

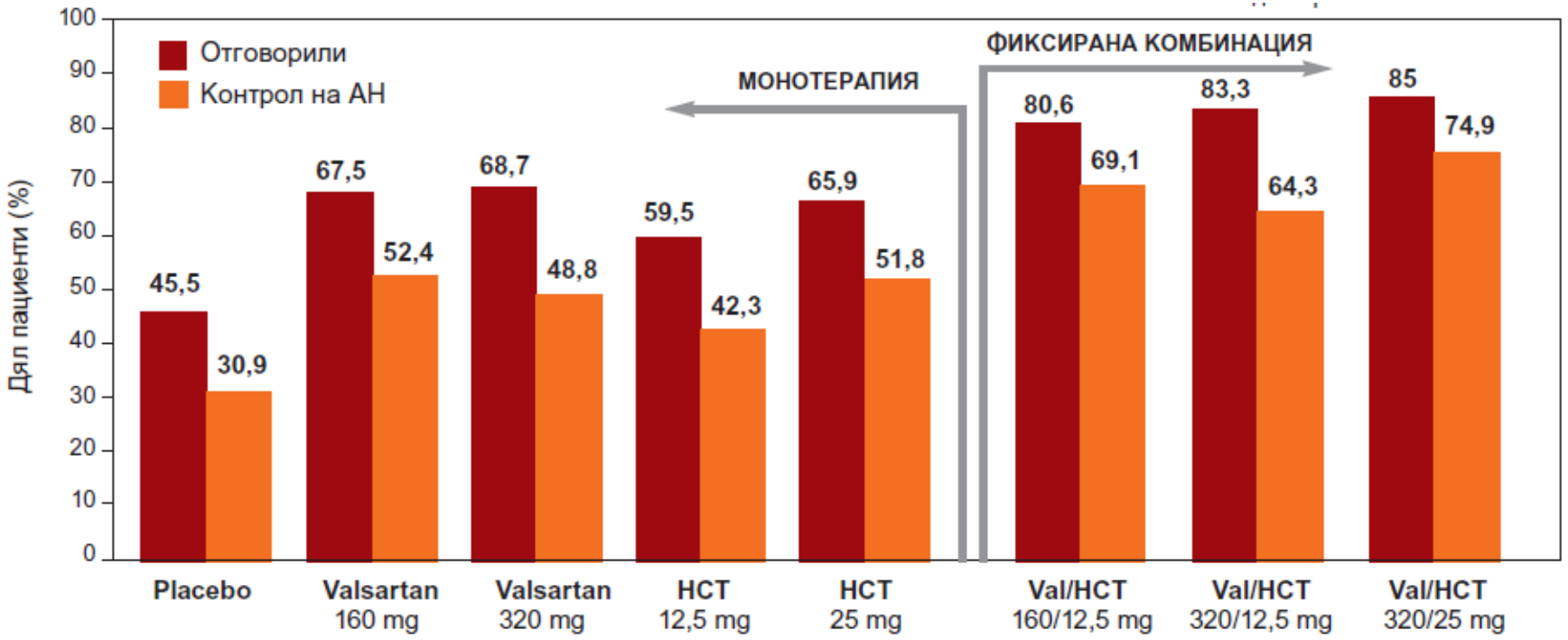


Степен на контрол с комбиноциат Angiotensin Receptor Blocker/Hydrochlorothiazide като инициална терапия при пациенти с тежка хипертония



The Journal of Clinical Hypertension
Volume 6, Issue 11, pages 614-620, 25 MAY 2007 DOI: 10.1111/j.1524-6175.2004.03808.x
http://onlinelibrary.wiley.com/doi/10.1111/j.1524-6175.2004.03808.x/full#f2

Фиксираната комбинация Valsartan+HCT повишава делът на постигналите контрол на АН

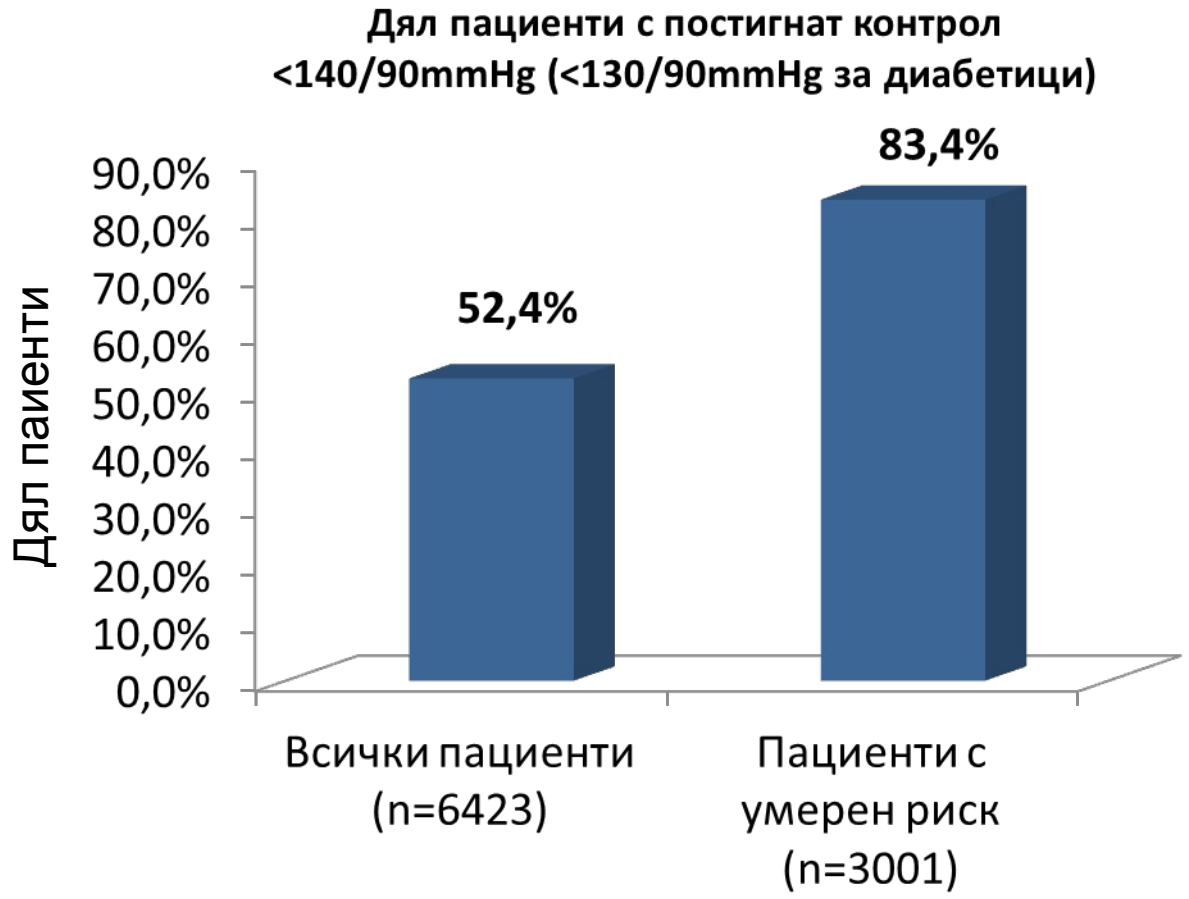


Отговорили: Средно ДАН снижено с ≥10mmHg
Контрол на АН: Средно ДАН <90mmHg

Всеки 8 от 10 пациента отговарят, а всеки 7 от 10 постигат контрол на АН с Valsartan+HCT

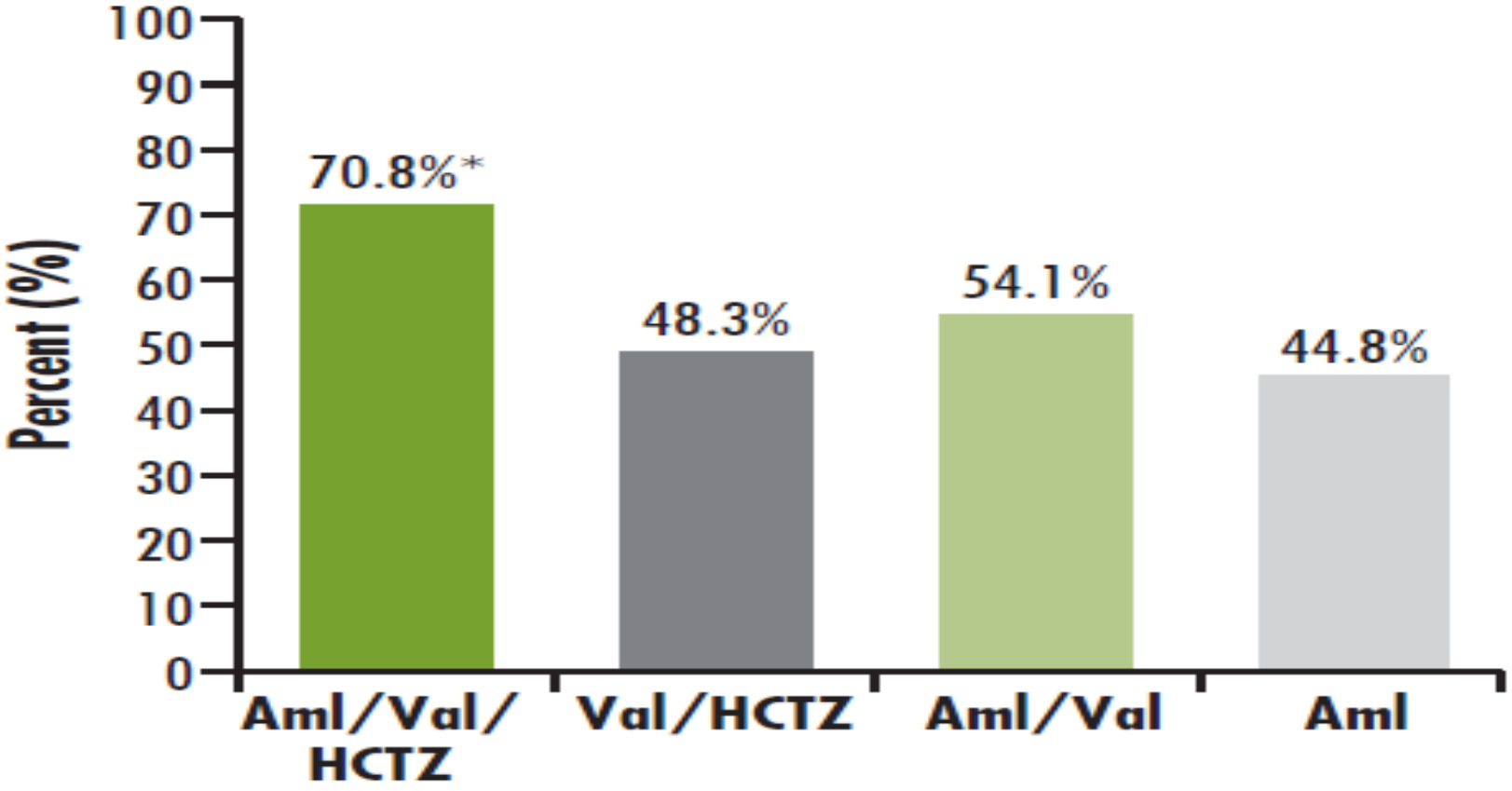
Nash D et al. *Blood Pressure Control 2009:2 39-54*

Фиксирана комбинация- ACEI-CCB-Повече от 50% от пациентите постигат контрол на АН <140/90 mmHg в RAMONA



Tomcsany J, RAMONA study, Hypertonia és Nephrologia 2013; 17(1):34-8

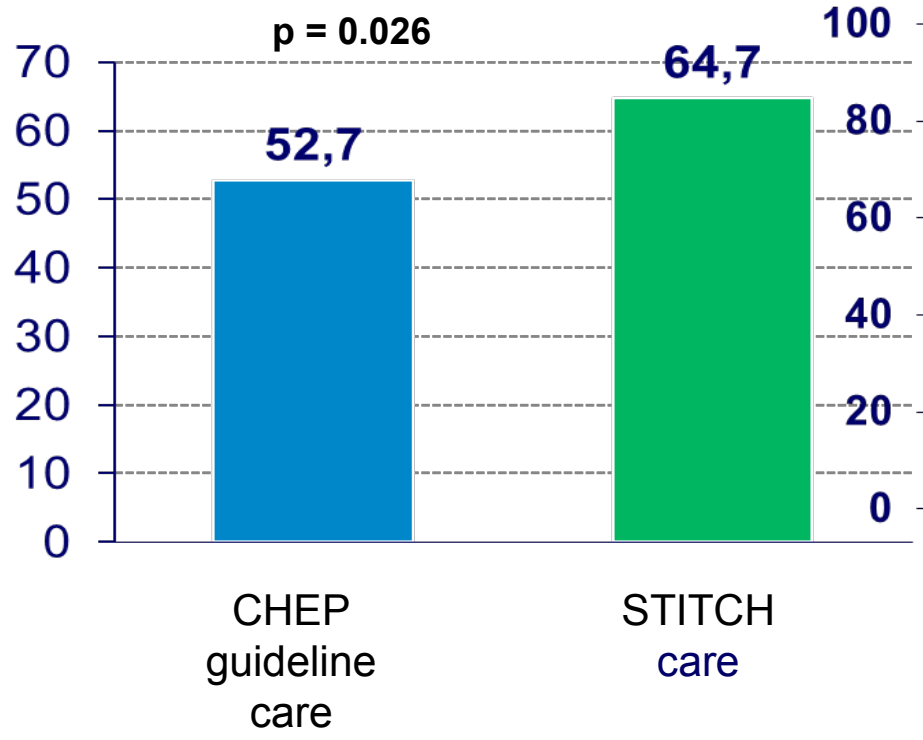
Още по-добър процент на контрол се постига при тройна комбинация



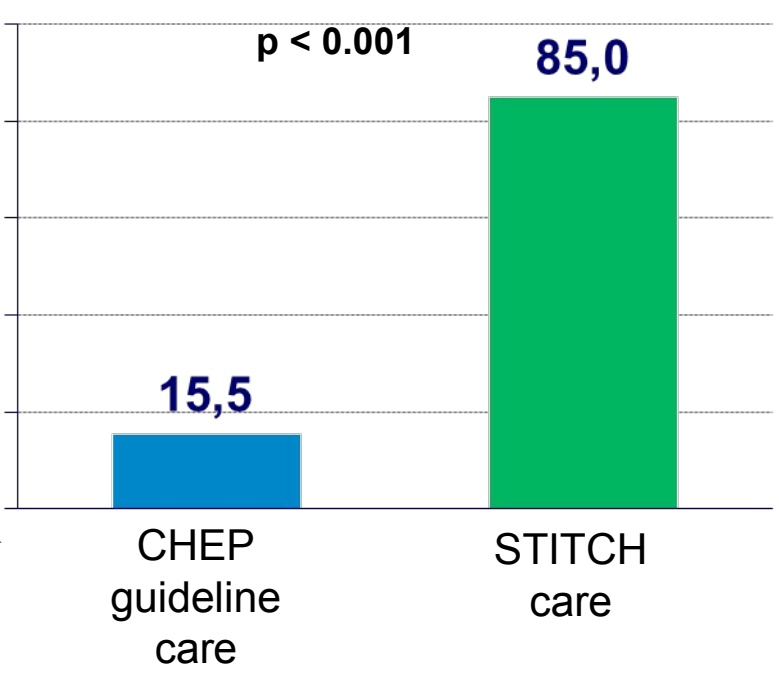
*$P < .0001$; triple therapy with Aml/Val/HCTZ vs any dual therapy. Systolic and diastolic control rates were greater at each assessment for triple therapy compared with any dual therapy ($P \leq .0002$) (data not shown).

Стартирането с фиксирана комбинация увеличава делът на контролираните пациенти с 12% спрямо официалните препоръки

Първичен резултат:
Дял пациенти постигнали прицелно АН

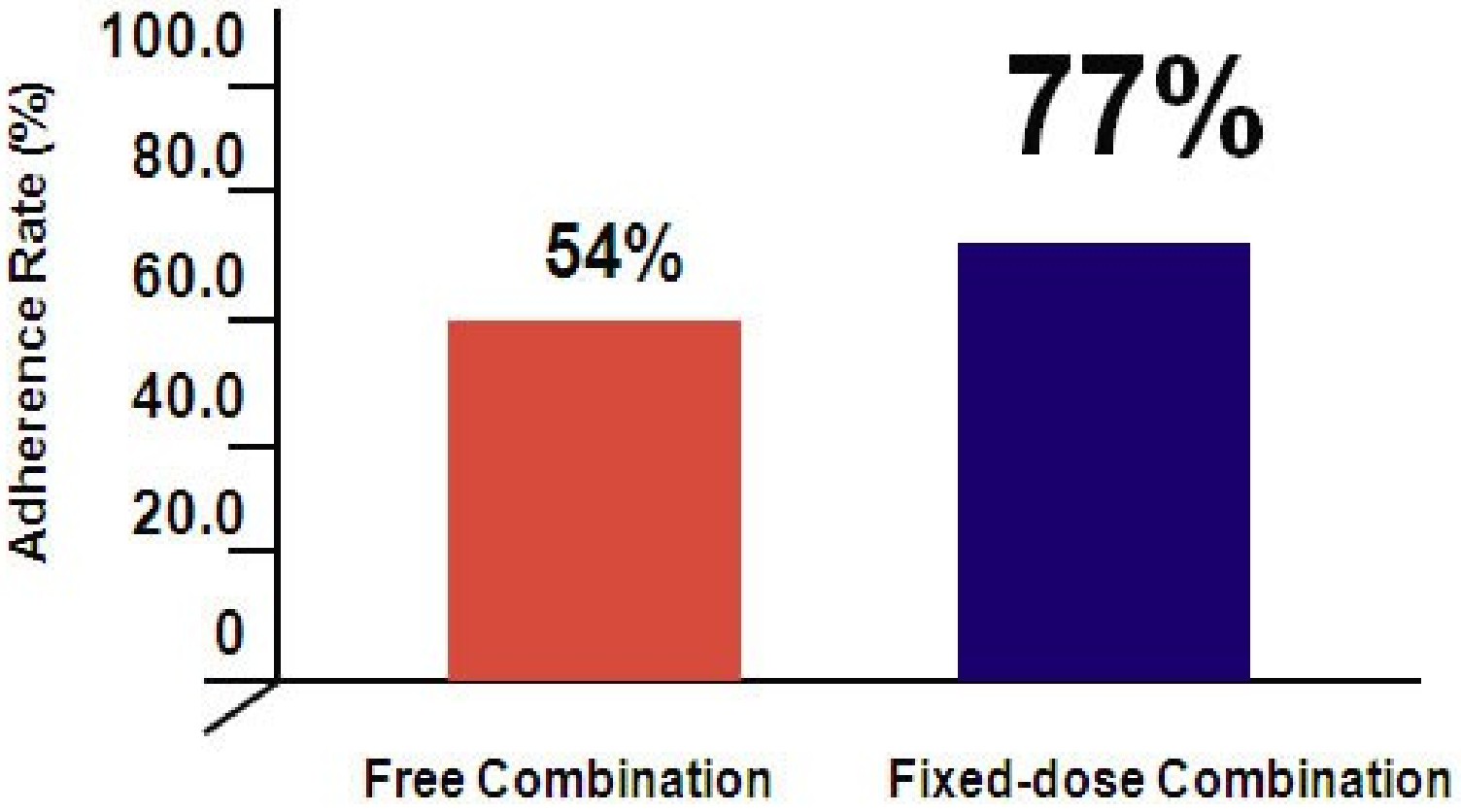


Вторичен резултат:
Дял пациенти стартирали с фиксирана комбинация



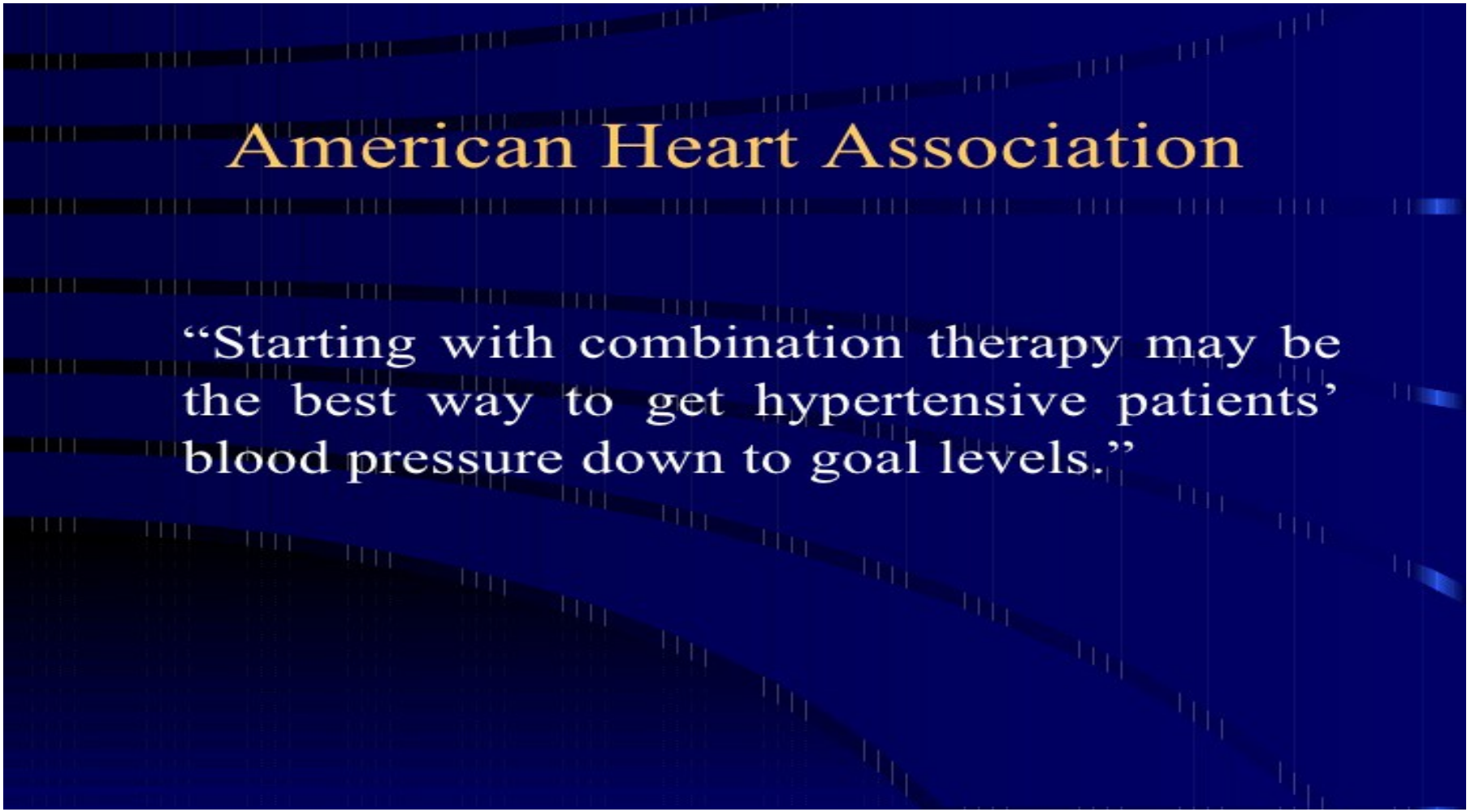
Feldman et al. *Hypertension*. 2009;53:646–653.

По-добро придържане към терапията с фиксирана комбинация!



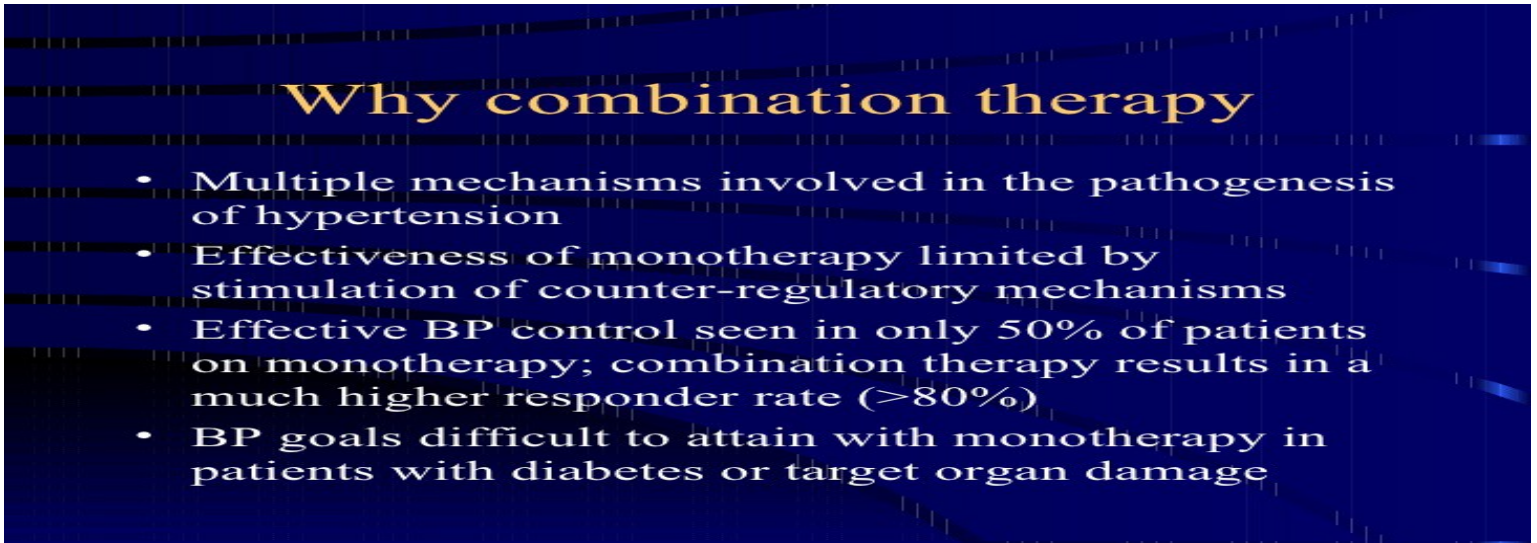
Feldman et al. *Hypertension*. 2009;53:646–653

Стартът с комбинирана терапия е може би най-добрият начин за постигане на таргетните стойнсоти на АН



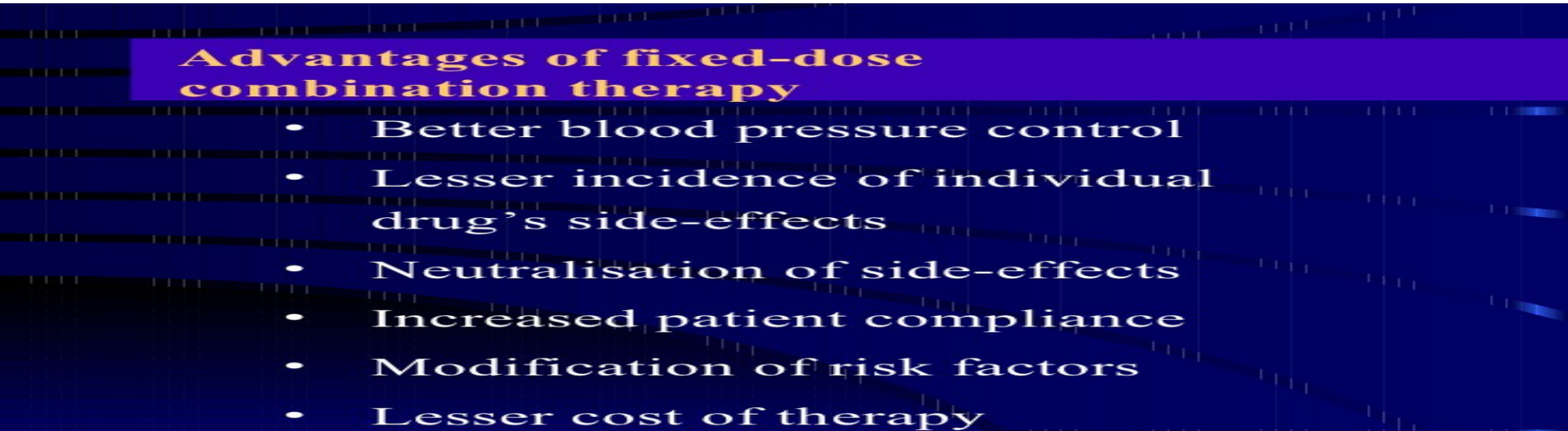
Защо с комбинирана терапия?

- Множество механизми участват в патогенезата на АХ
- Ефектът на монотерапията е ограничен от контрарегулаторни механизми
- Максимум 50% от пациентите достигат таргетните стойности с монотерапия докато при комбинирана терапия респондерите са над 80%
- Още по трудно се достигат с монотерапия таргетните стойности при диабетици и пациенти с ТОУ



Предимства на фиксираните комбинации

- Подобрен контрол на АН
- По-малък процент на индивидуалните странични ефекти на съставките
- Взаимно неутрализиране на контрарегулаторните механизми и страничните ефекти
- Подобрено придържане към терапията
- Благоприятно повлияване на рисковите фактори
- По-ниска крайна цена



Българска
Кардиология
5/2005

Консенсус за моно – и комбинирана терапия на артериалната хипертония в България

Работна група на Дружеството
на кардиолозите в България:
С. Торбова, Н. Гочева, В. Сиракова,
Р. Търновска, Т. Донова, В. Влахов

Hypertension Control Nearly Doubled Through Integrated Control M.G Jeffe

ASH 26th Annual Meeting, May 25, New York.

The Kaiser Foundation Plan of Northern California

Приложени 6 стратегии

1.Методични указания

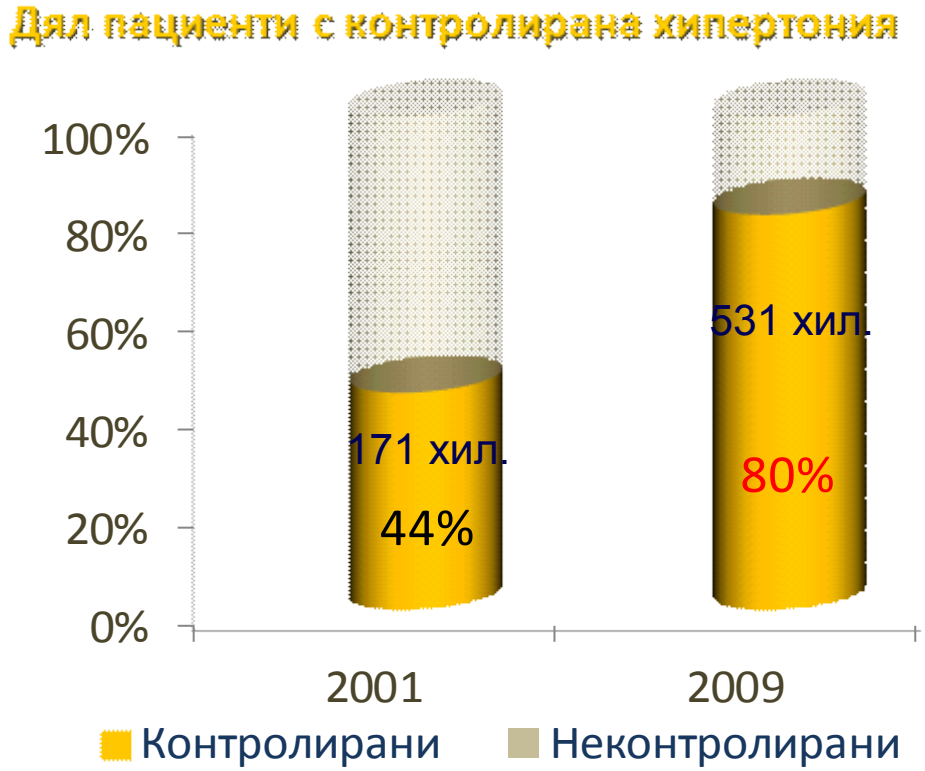
2.Регистър база данни

3.Показатели за оценка на наблюдението

4.Положителен опит

5.Използване на фиксирани медикаментозни комбинации

6.Посещения от не-медицински лица



Благодаря за вниманието!