VII Reunión de Riesgo Vascular
Palacio de Congresos. Valencia
5 y 6 de Mayo 2011

HTA: ¿Qué ha habido de nuevo en el 2010?

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¿Hay diferencias entre fármacos en reducción del riesgo vascular?

Brief Review

Implications of Recently Published Trials of Blood Pressure–Lowering Drugs in Hypertensive or High-Risk Patients

Jan A. Staessen, Tom Richart, Zengwu Wang, Lutgarde Thijs

stract—We reviewed 6 recent outcome trials of blood pressure (BP)–lowering drugs in 74 524 randomized hypertensive or high-risk patients. Over interpretation of nonsignificant or marginal probability values in large trials with overlapping end points, exclusion of patients not tolerating or not adhering to experimental treatments, labeling nonsignificant treatment effects as modest, and insufficient information on the quality of the BP measurements or on the BP changes early after randomization raise concern. From a clinical viewpoint, results should not be extrapolated to patients with characteristics dissimilar from those randomized. The benefit beyond BP lowering in cardiovascular prevention is tiny. Dual inhibition of the renin system should only be used in patients at high risk, in whom all drug combinations have been tried and who cannot be controlled by a single renin system inhibitor. Current evidence does not support BP lowering in normotensive patients or the use of renin system inhibitors for prevention of stroke recurrence. Because angiotensin-receptor blockers might offer less protection against myocardial infarction than angiotensin-converting enzyme inhibitors, the latter should remain the preferred renin system inhibitor for cardiovascular prevention in angiotensin-converting enzyme inhibitor-tolerant patients. In 2 trials, in which new-onset diabetes was a predefined end point, 1000 patients had to be treated for 1 year with an angiotensin-receptor blocker instead of placebo to prevent just 2 cases. From a design viewpoint, the time has come to revise the concept of large simple trials and to pursue research questions that serve patient interests more than showing noninferiority or highlight the ancillary qualities of marketable antihypertensive drugs. (*Hypertension*. 2010;55:819-831.)

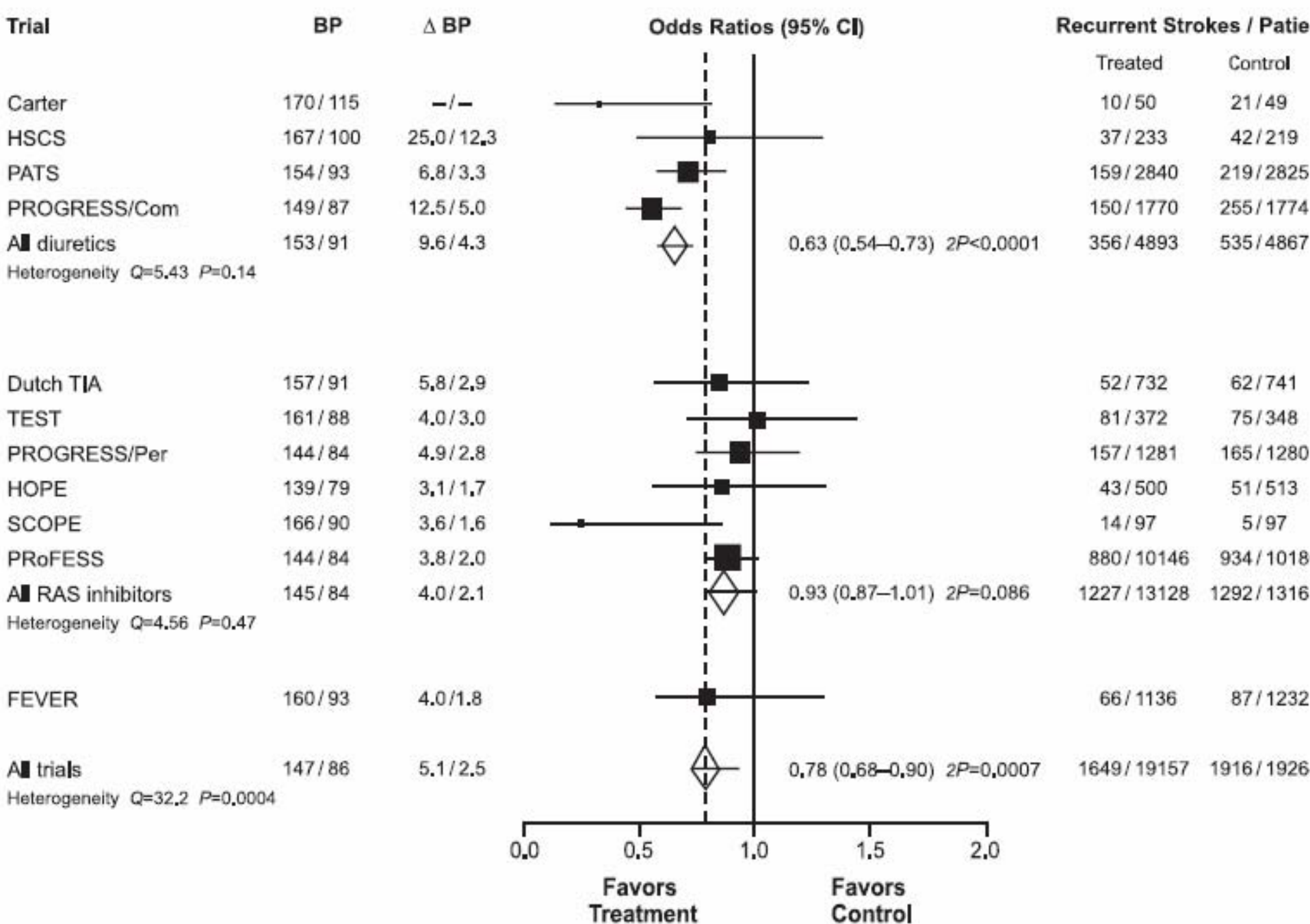
Implicaciones de los ensayos publicados más recientemente sobre tratamiento farmacológico de la HTA en pacientes de riesgo elevado.

Outcome	Trial	Patients n	Events n	SBP mm Hg	Observed Odds Ratio (95% CI)	Predicted Odds Ratio (95% CI)	p
CVM	TRANSCEND[27]	5926	450 (7.6)	4.0	1.03 (0.85 to 1.24)	0.83 (0.73 to 0.95)	0.066
CVE	ACCOMPLISH[12]	11 506	652 (5.7)	0.9	0.79 (0.68 to 0.92)	0.93 (0.85 to 1.02)	0.070
CVE	ADVANCE[14]	11 140	1000 (9.0)	5.6	0.92 (0.81 to 1.04)	0.74 (0.67 to 0.81)	0.007
CVE	PRoFESS[24]	20 332	2666 (13.1)	3.8	0.94 (0.87 to 1.02)	0.80 (0.74 to 0.86)	0.004
CVE	ONTARGET/combination[21]	17 078	2400 (14.1)	2.4	1.00 (0.93 to 1.09)	0.88 (0.81 to 0.95)	0.025
CVA	ADVANCE[14]	11 140	433 (3.9)	5.6	0.98 (0.81 to 1.18)	0.68 (0.62 to 0.75)	0.0007
CVA	PRoFESS[24]	20 332	1814 (8.9)	3.8	0.95 (0.86 to 1.04)	0.74 (0.63 to 0.87)	0.009
MI	ONTARGET/telmisartan[21]	17 118	853 (5.0)	0.9	1.07 (0.94 to 1.22)	0.93 (0.85 to 1.02)	0.084
MI	ONTARGET/combination[21]	11 140	851 (7.6)	2.4	1.08 (0.94 to 1.23)	0.89 (0.77 to 1.03)	0.056

Jan A. Staessen; Tom Richart; Zengwu Wang; Lutgarde Thijs
Hypertension. 2010;55:819

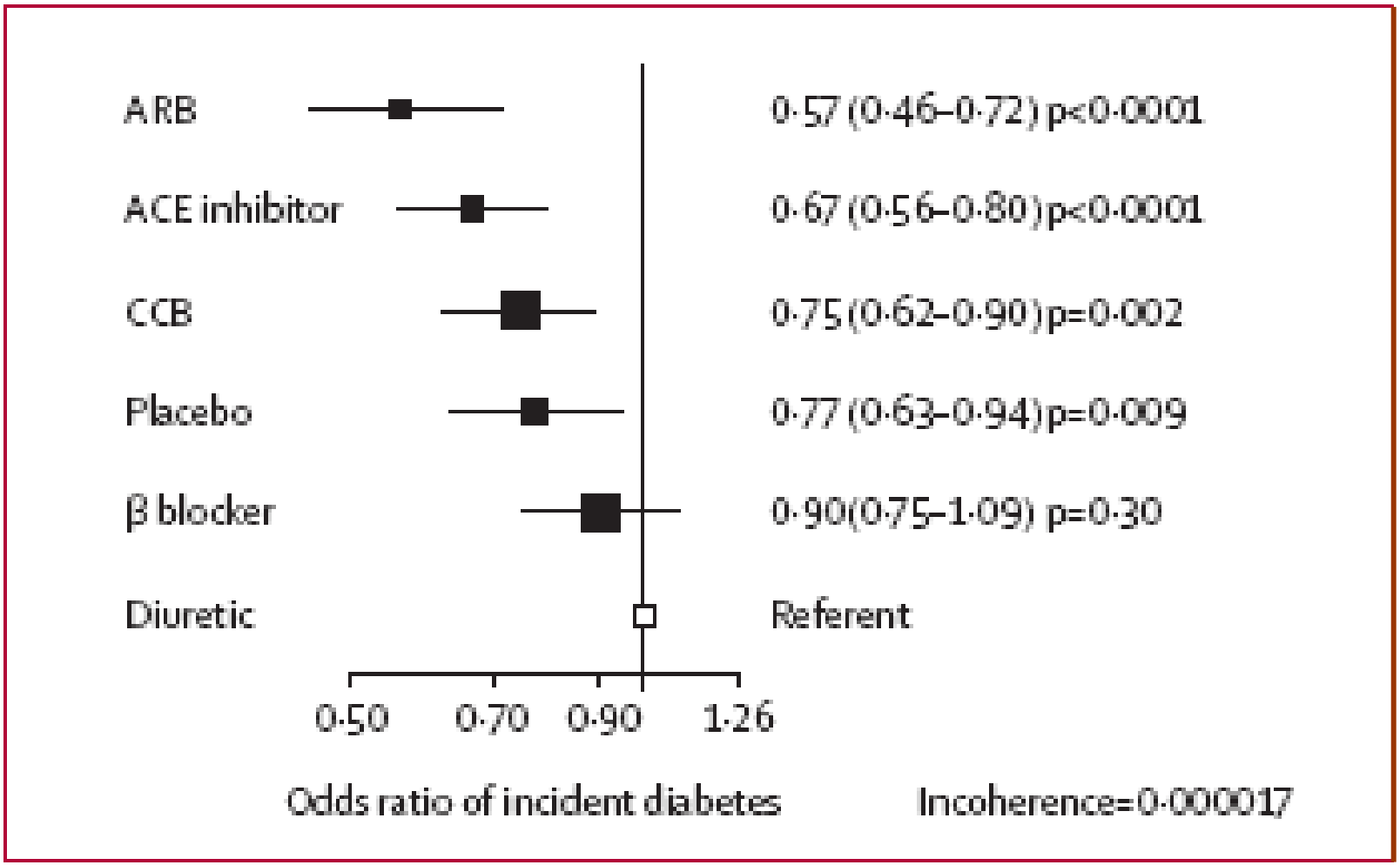
“En general, los riesgos observados y previstos no diferían significativamente, indicando que los gradientes de PA eran suficientes para explicar los resultados en eventos”

Efecto de la reducción de PA sobre la recurrencia de ictus fatal y no fatal



“En contraste con las recomendaciones de algunas guías, los resultados en prevención secundaria de AVC no apoyan el uso de los inhibidores del Sistema RAA en la prevención de la recurrencia de ictus”

Incidencia de nuevos casos de diabetes
Meta-analisis de 22 ensayos clínicos
(143153 pacientes)



William J Elliott, Peter M Meyer Lancet 2007; 369: 201–07

“Estimaciones basadas en PROFESS y TRASCEND indican que se debería tratar a 1000 pacientes durante 1 año con ARAII en vez de un fármaco metabólicamente neutro para prevenir sólo 2 casos de DM de debut”

¿Hay diferencias entre fármacos en protección orgánica?

Regression of Left Ventricular Mass by Antihypertensive Treatment

A Meta-Analysis of Randomized Comparative Studies

Robert H. Fagard, Hilde Celis, Lutgarde Thijs, Stijn Wouters

Abstract—Blood pressure–lowering therapy reduces left ventricular mass, but the question of whether differences exist among drug classes has not been fully resolved. Our aim was to compare the effects of diuretics, β-blockers, calcium channel blockers, angiotensin-converting enzyme inhibitors, and angiotensin receptor blockers on left ventricular mass regression in patients with hypertension on the basis of prospective, randomized comparative studies. We performed meta-analyses, involving pooled pairwise comparisons of the drug classes and of each class versus other classes statistically combined, and meta-regression analyses to identify the determinants of the regression. The 75 relevant publications involved 84 pairwise comparisons and 6001 patients. Regression of left ventricular mass was significantly less ($P=0.01$) with β-blockers (9.8%) than with angiotensin receptor blockers (12.5%), but none of the other analyzable pairwise comparisons between drug classes revealed significant differences ($P>0.10$). In addition, β-blockers showed less regression than the other 4 classes statistically combined ($P<0.01$), and regression was more pronounced with angiotensin receptor blockers versus the others ($P<0.01$). In multivariable meta-regression analysis on all of the treatment arms, β-blocker treatment was a significant and negative predictor of the regression (−3.6%; $P<0.01$), but this was not the case for the other drug classes, including angiotensin receptor blockers. In conclusion, β-blockers show less regression of left ventricular mass, whereas angiotensin receptor blockers may induce larger regression. The inferiority of β-blockers appears to be more convincing than the superiority of angiotensin receptor blockers. (***Hypertension*. 2009;54: 1084-1091.**)

Regresión de HVI
Meta-análisis de 75 publicaciones

Table 2. Pairwise Comparison of Each Drug Class With the Other Classes Statistically Combined

	Change in LVM (Index), %					Change in Systolic BP, %				
Drug Class	N	n	Reference Drug	Other Drugs	*P*	N	n	Reference Drug	Other Drugs	*P*
DIU	24	1339	−7.6±1.18	−8.3±1.80	NS	21	1251	−11.9±0.73	−12.6±0.87	NS
BB	31	2680	−8.8±1.05	−11.6±1.23	0.002	29	2634	−13.8±0.67	−14.0±0.67	NS
CCB	44	2100	−12.8±0.06	−13.6±1.00	NS	41	1995	−12.2±0.56	−12.4±0.56	NS
ACEi	49	2525	−11.4±1.18	−10.4±1.00	NS	45	2426	−13.6±0.51	−13.7±0.49	NS
ARB	20	2384	−12.6±1.50	−9.4±1.33	0.002	20	2384	−14.9±0.83	−14.0±0.83	0.07

Values are weighted mean±SEM. ACEi indicates ACE inhibitor; ARB, angiotensin receptor blocker; BB, β-blocker; CCB, calcium channel blocker; DIU, diuretic; n, No. of participants; N, No. of pairwise comparisons; NS, not significant ($P>0.3$ for all comparisons).

¿Hay diferencias entre fármacos en variabilidad tensional?

Effects of antihypertensive-drug class on interindividual variation in blood pressure and risk of stroke: a systematic review and meta-analysis

Alastair J S Webb, Urs Fischer, Ziyah Mehta, Peter M Rothwell

***Lancet* 2010; 375: 906–15**

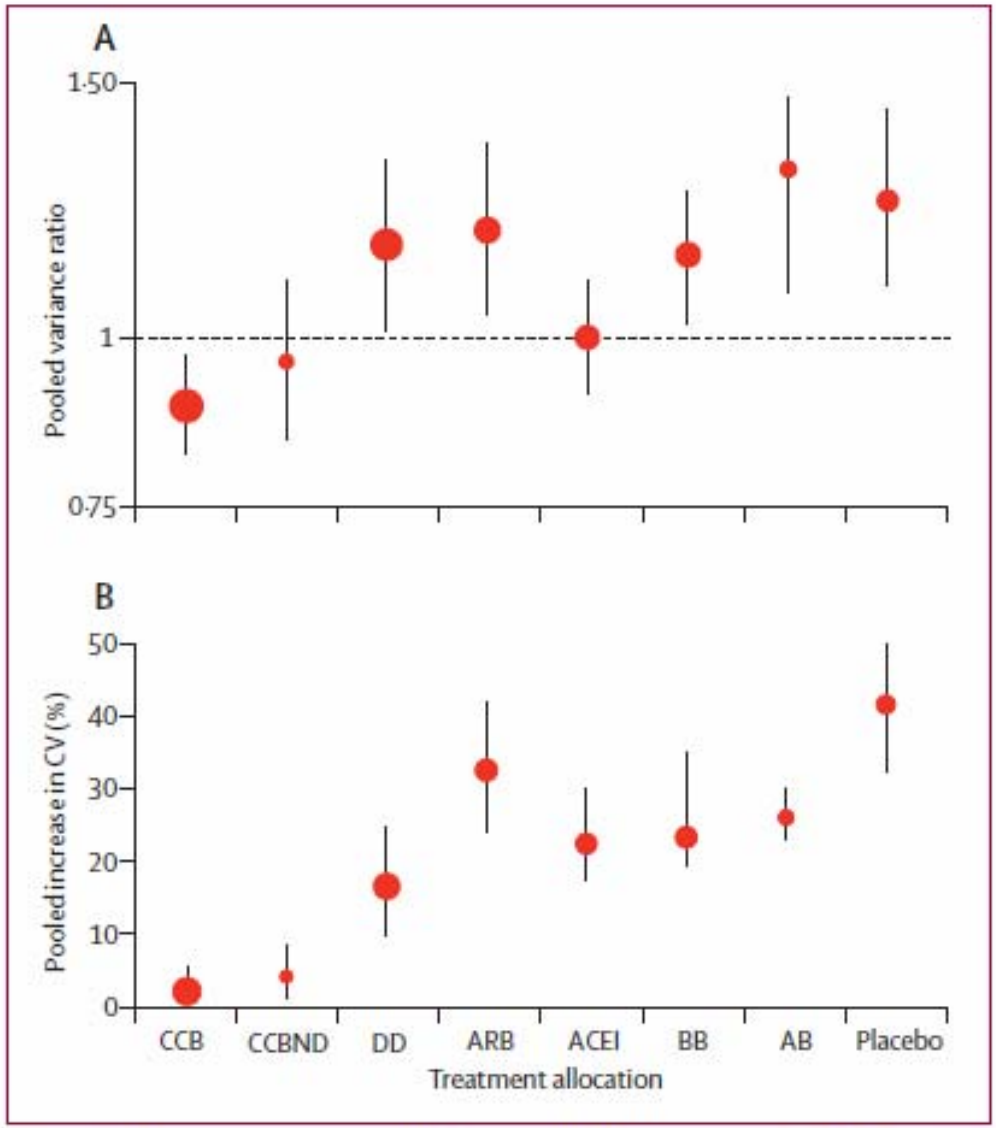
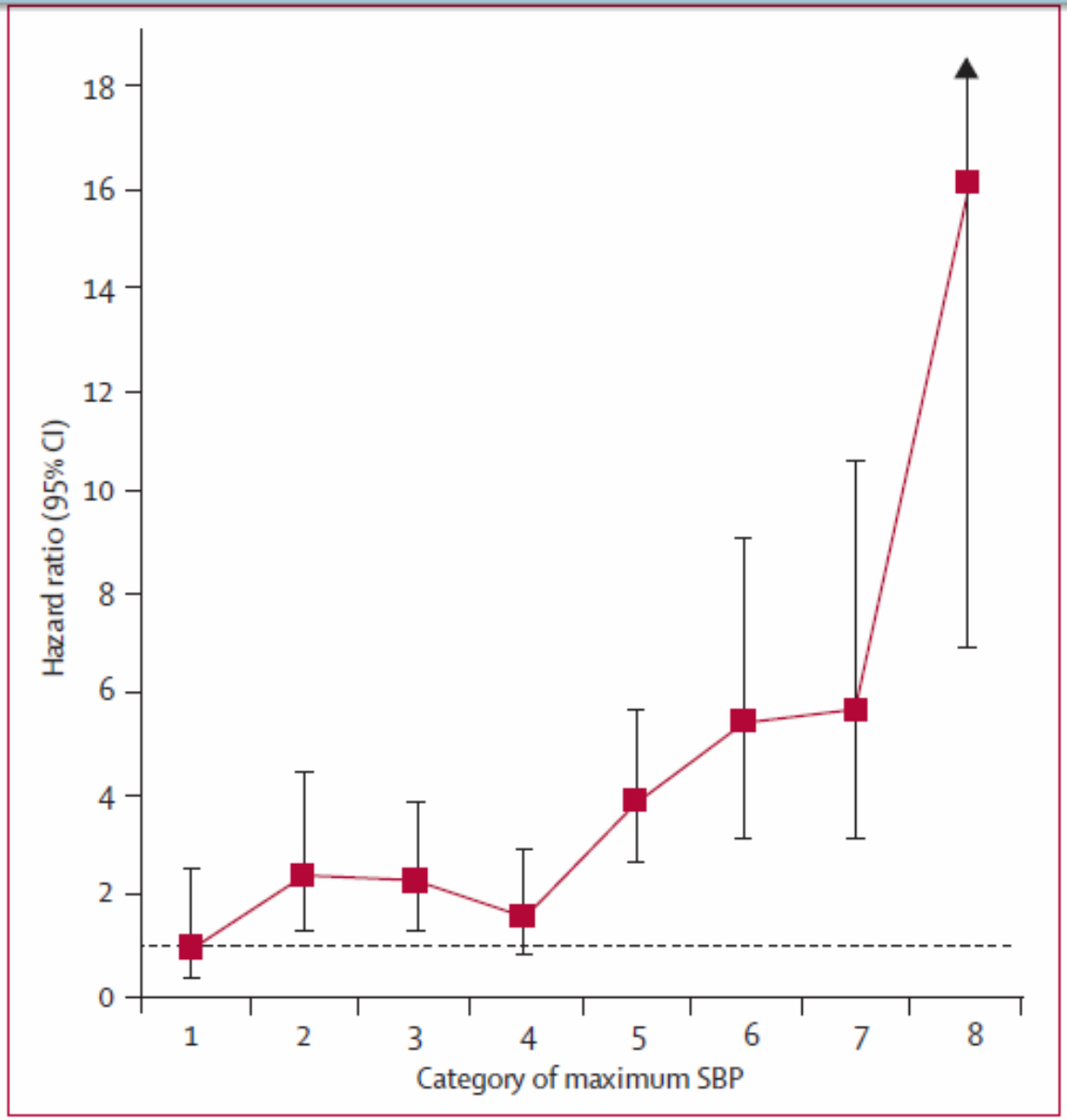


Figure 1: **Change in group variation in systolic blood pressure at follow-up compared with baseline as variance ratio (A) and percentage increase in coefficient of variation (B)**



Peter M Rothwell et al.,Lancet 2010; 375: 895–905

Figure 2: Hazard ratios for risk of any subsequent stroke by categories of maximum SBP of the first seven measurements of blood pressure during the first 2 years of follow-up in the UK-TIA trial, adjusted for mean SBP during the same period

Otros aspectos terapéuticos: ¿es la HCTZ un fármaco de primera elección?

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Antihypertensive Efficacy of Hydrochlorothiazide as Evaluated by Ambulatory Blood Pressure Monitoring

A Meta-Analysis of Randomized Trials

Franz H. Messerli, MD,* Harikrishna Makani, MD,* Alexandre Benjo, MD,* Jorge Romero, MD,* Carlos Alviar, MD,* Sripal Bangalore, MD, MHA†

New York, New York

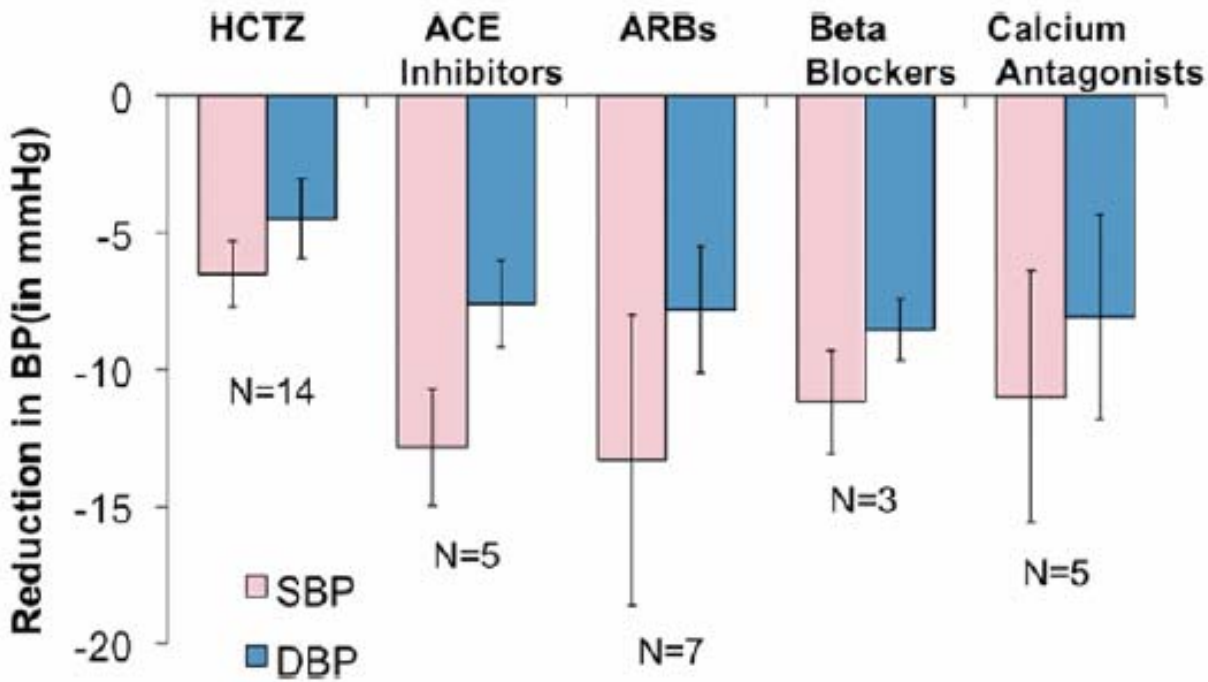


Figure 2 **Antihypertensive HCTZ Efficacy as Assessed by 24-h ABP Monitoring**

Compared with hydrochlorothiazide (HCTZ) dose 12.5 to 25 mg, $p < 0.001$ for other antihypertensive drugs, as assessed by 24-h ambulatory blood pressure (ABP) monitoring. **Bars** represent 95% confidence intervals; N indicates number of studies. ACE = angiotensin-converting enzyme; ARB = angiotensin-receptor blocker; DBP = diastolic blood pressure **(blue bars)**; SBP = systolic blood pressure **(pink bars)**.

“No es adecuado utilizar la hidroclorotiazida como un antihipertensivo de primera elección”

Beneficios en morbimortalidad de estrategias cronoterapéuticas diferentes

Chronobiology International, 27(8): 1629–1651, (2010)

ISSN 0742-0528 print/1525-6073 online
DOI: 10.3109/07420528.2010.510230

informa
healthcare

INFLUENCE OF CIRCADIAN TIME OF HYPERTENSION TREATMENT ON CARDIOVASCULAR RISK: RESULTS OF THE MAPEC STUDY

Ramón C. Hermida, Diana E. Ayala, Artemio Mojón, and José R. Fernández

Bioengineering and Chronobiology Laboratories, University of Vigo, Campus Universitario, Vigo, Spain

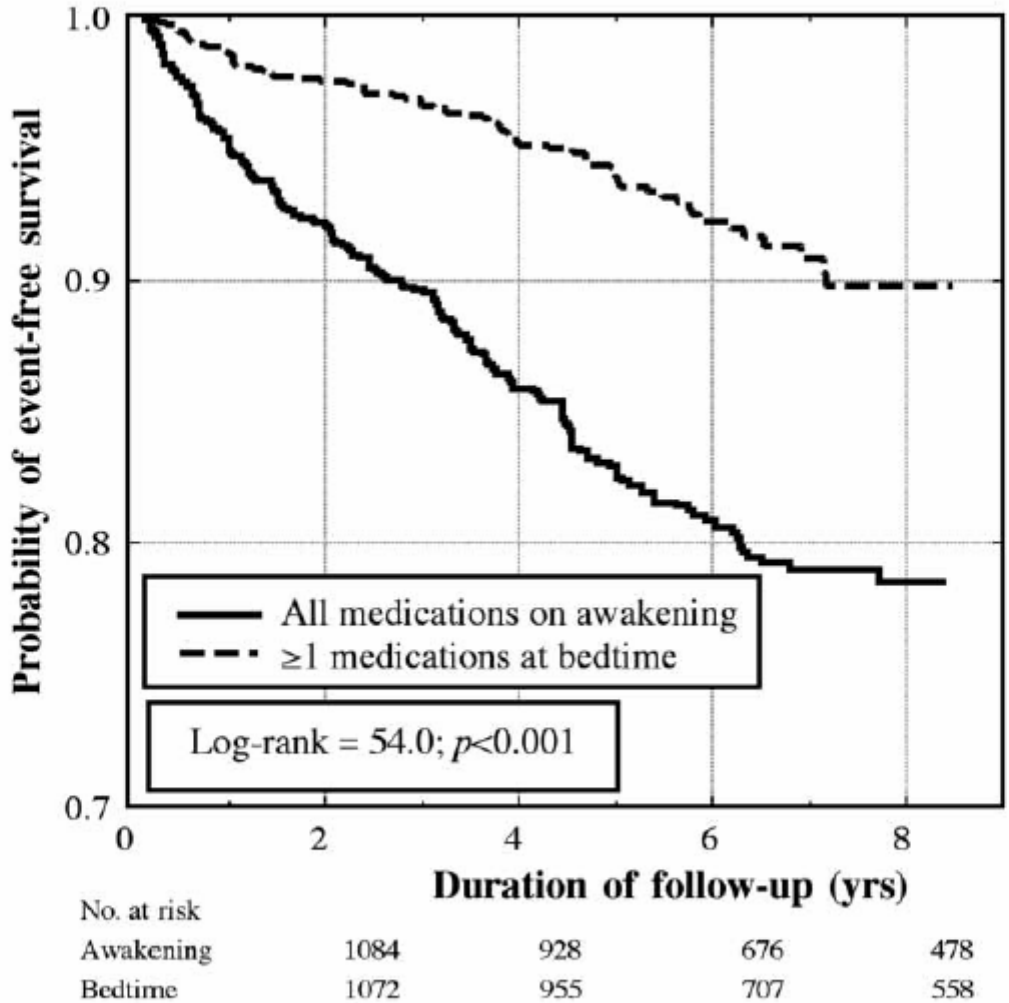
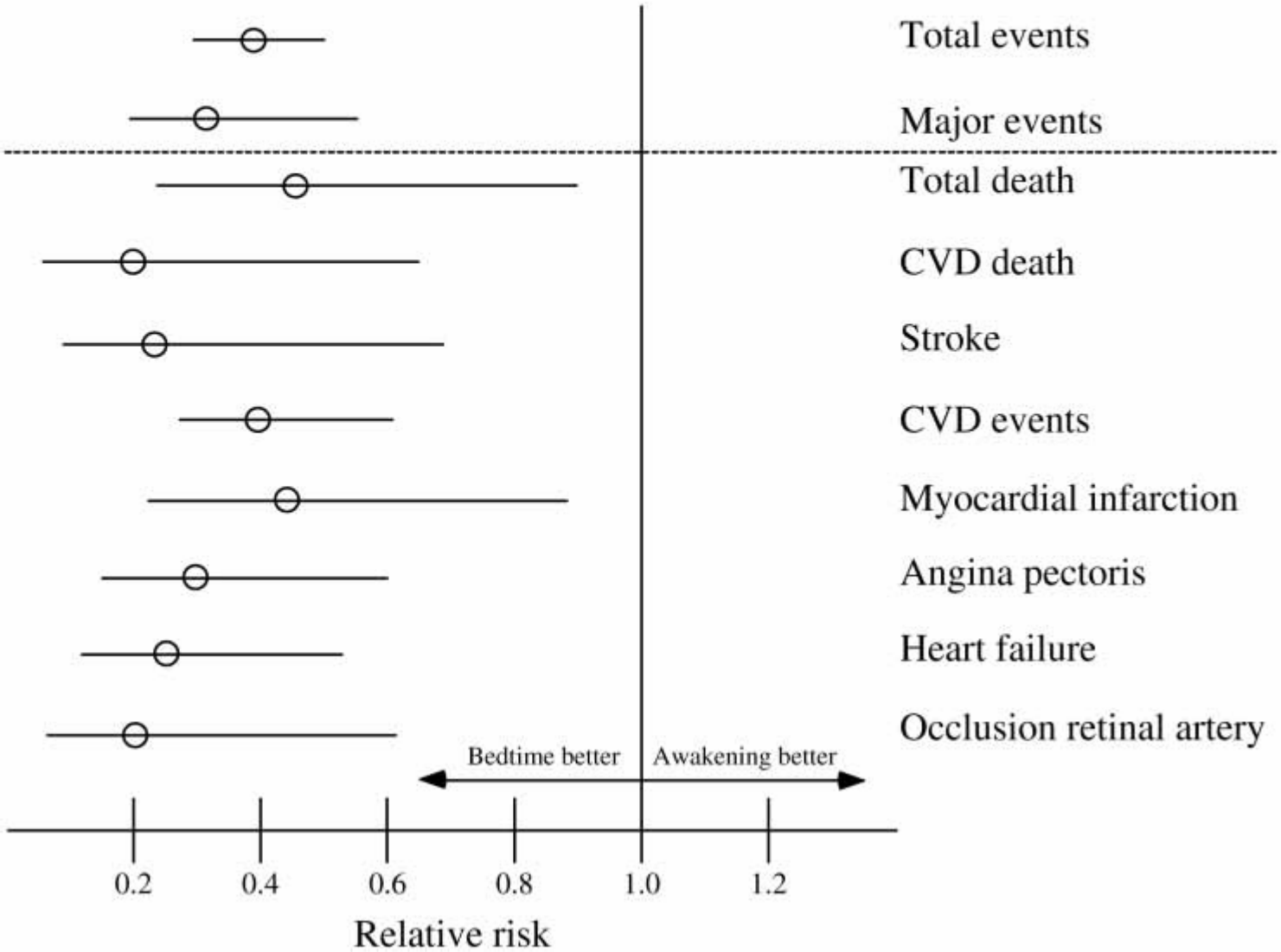


FIGURE 2 Kaplan-Meier survival curves as a function of time-of-day of hypertension treatment, i.e., for subjects ingesting either all their medication upon awakening or ≥1 medications at bedtime.


Total events
Major events
Total death
CVD death
Stroke
CVD events
Myocardial infarction
Angina pectoris
Heart failure
Occlusion retinal artery
Bedtime better
Awakening better
0.2
0.4
0.6
0.8
1.0
1.2
Relative risk

Cambios en PA ambulatoria y clínica en comparación con la basal

Toma medicación	Mañana	Noche	p
PAS clínica, mm Hg	−10.0± 17.7	−13.1± 19.7	<.001
PAD clínica, mm Hg	−6.0± 10.7	−7.4 ± 10.8	.004
PP clínica, mm Hg	−4.0± 11.2	−5.7 ± 12.2	.001
FC clínica, beats/min	−1.6± 10.6	−1.9 ± 11.1	.410
Media PAS día, mm Hg	−9.4± 13.3	−8.9 ± 13.4	.401
Media PAS noche, mm Hg	−6.6± 12.5	−11.8± 13.2	<.001
Media PAS 48-h, mm Hg	−8.6± 12.3	−9.7 ± 12.5	.028
Reducción PAS noche, %	−1.5± 6.7	2.9 ± 7.4	<.001
Media PAD día, mm Hg	−7.2± 8.5	−6.5 ± 8.9	.035
Media PAD noche, mm Hg	−5.2± 8.3	−7.9 ± 8.5	<.001
Media PAD 48-h, mm Hg	−6.6± 7.9	−6.8 ± 8.1	.534
Reducción PAD noche, %	−1.4± 7.8	3.1 ± 8.3	<.001

…La PA, cuanto más baja, mejor!!...

¿…es ello cierto…?

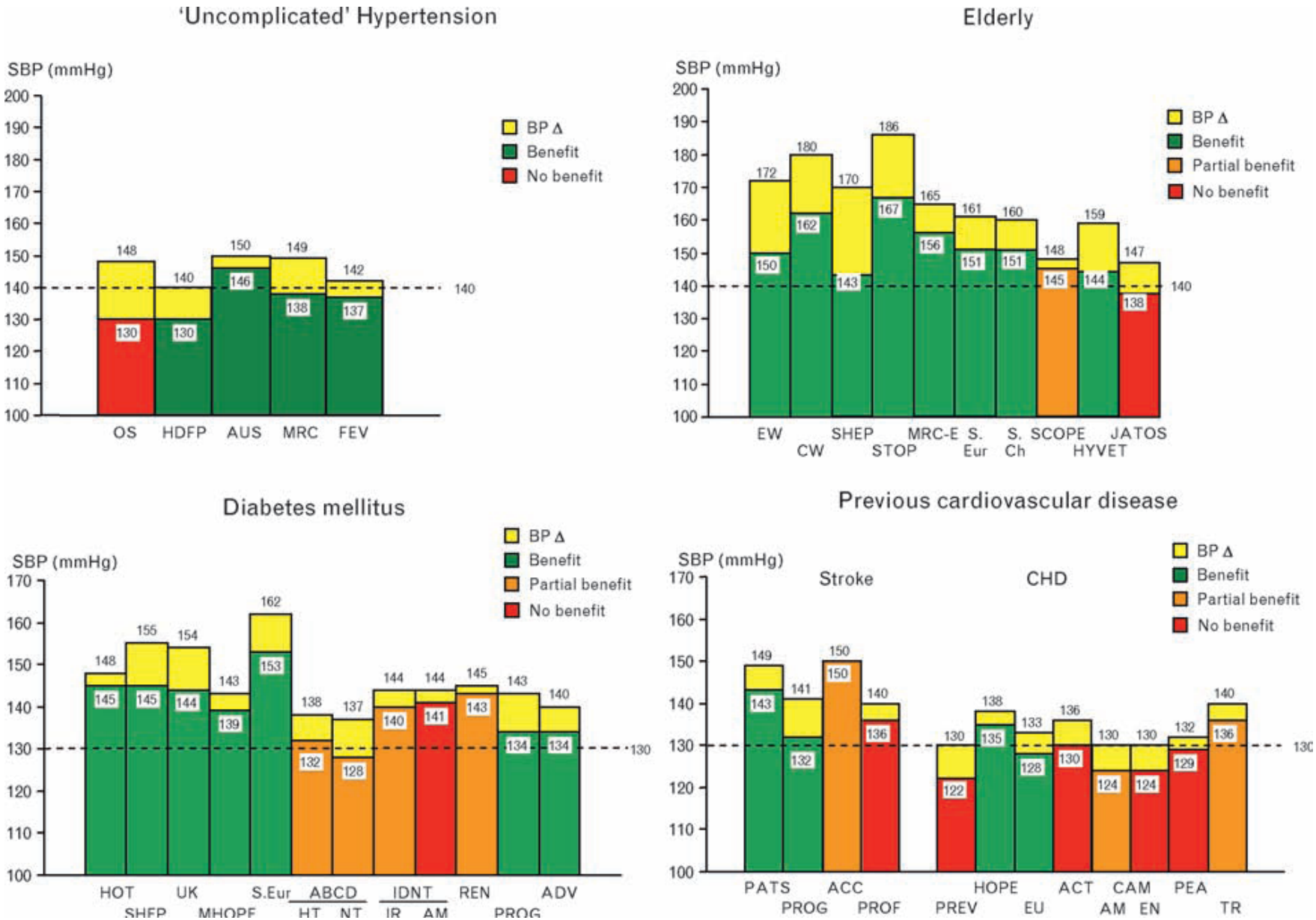
Reappraisal of European guidelines on hypertension management: a European Society of Hypertension Task Force document

Giuseppe Mancia[a], Stéphane Laurent[b], Enrico Agabiti-Rosei[c], Ettore Ambrosioni[d], Michel Burnier[e], Mark J. Caulfield[f], Renata Cifkova[g], Denis Clément[h], Antonio Coca[i], Anna Dominiczak[j], Serap Erdine[k], Robert Fagard[l], Csaba Farsang[m], Guido Grassi[n], Hermann Haller[o], Anthony Heagerty[p], Sverre E. Kjeldsen[q], Wolfgang Kiowski[r], Jean Michel Mallion[s], Athanasios Manolis[t], Krzysztof Narkiewicz[u], Peter Nilsson[v], Michael H. Olsen[w], Karl Heinz Rahn[x], Josep Redon[y], José Rodicio[z], Luis Ruilope[a1], Roland E. Schmieder[a2], Harry A.J. Struijker-Boudier[a3], Pieter A. van Zwieten[a4], Margus Viigimaa[a5] and Alberto Zanchetti[a6]

Journal of Hypertension 2009, 27:2121–2158

Correspondence to Professor Giuseppe Mancia, Clinica Medica, University of Milan-Bicocca, San Gerardo Hospital, Via Pergolesi 33, 20052 Monza, Milan, Ital

Beneficios según PA alcanzada por subgrupos de patología



Reappraisal of European Guidelines, Mancia G, J Hypertens 2009; 27: 2121

The NEW ENGLAND JOURNAL of MEDICINE

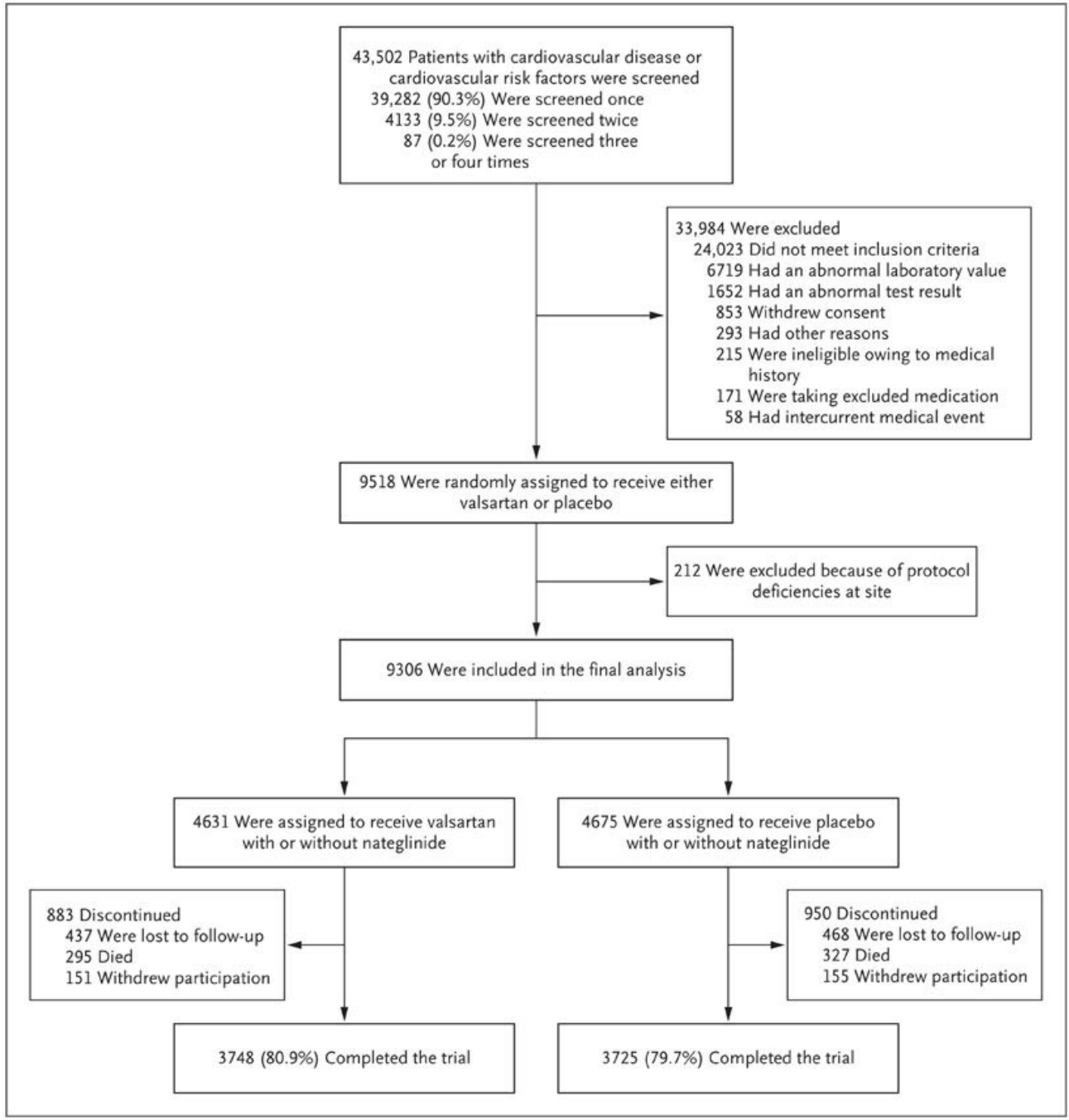
ORIGINAL ARTICLE

Effect of Valsartan on the Incidence of Diabetes and Cardiovascular Events

The NAVIGATOR Study Group*

N Engl J Med 2010;362:1477-90.

The NAVIGATOR trial

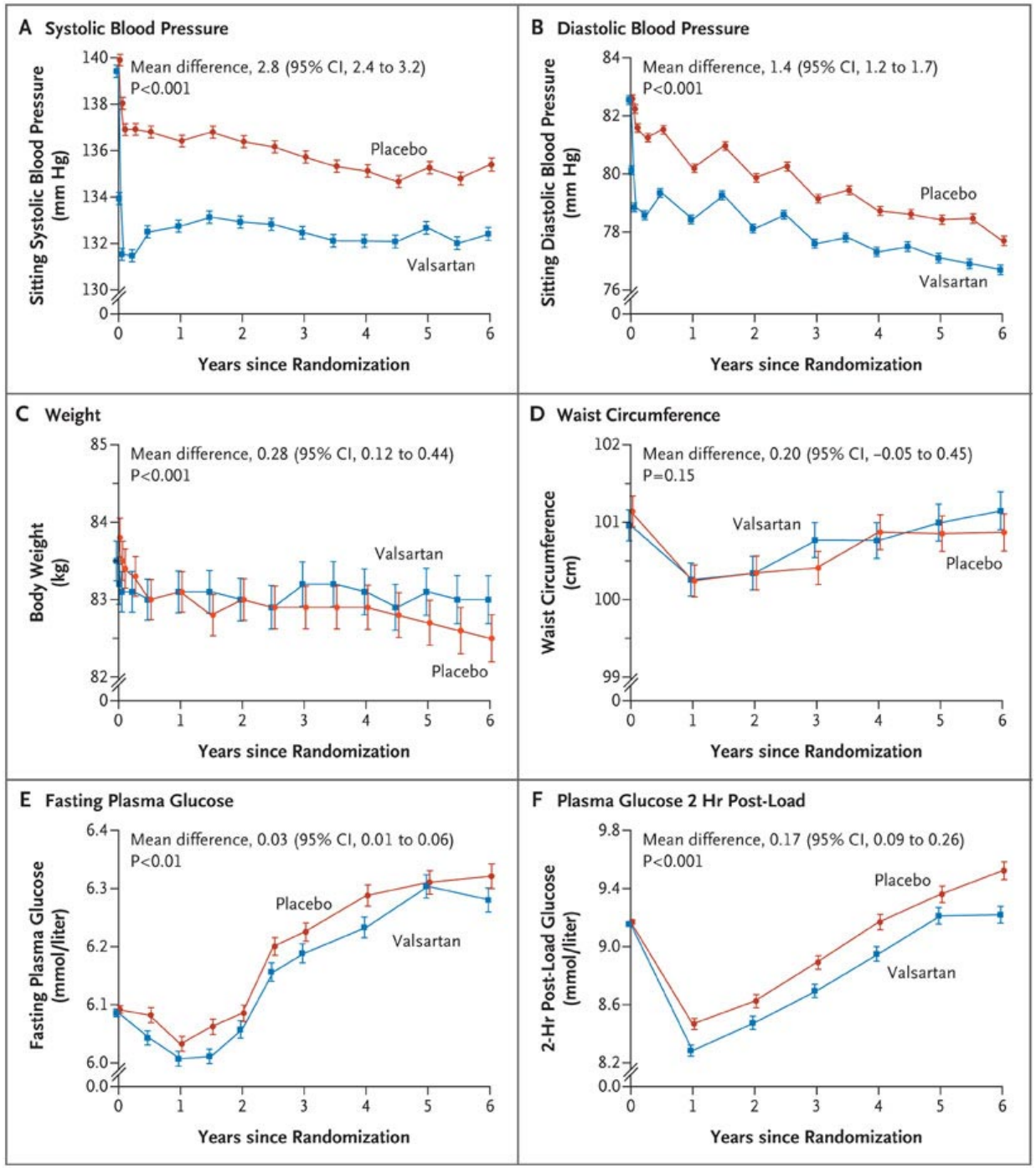


N Engl J Med 2010;362:1477-90.

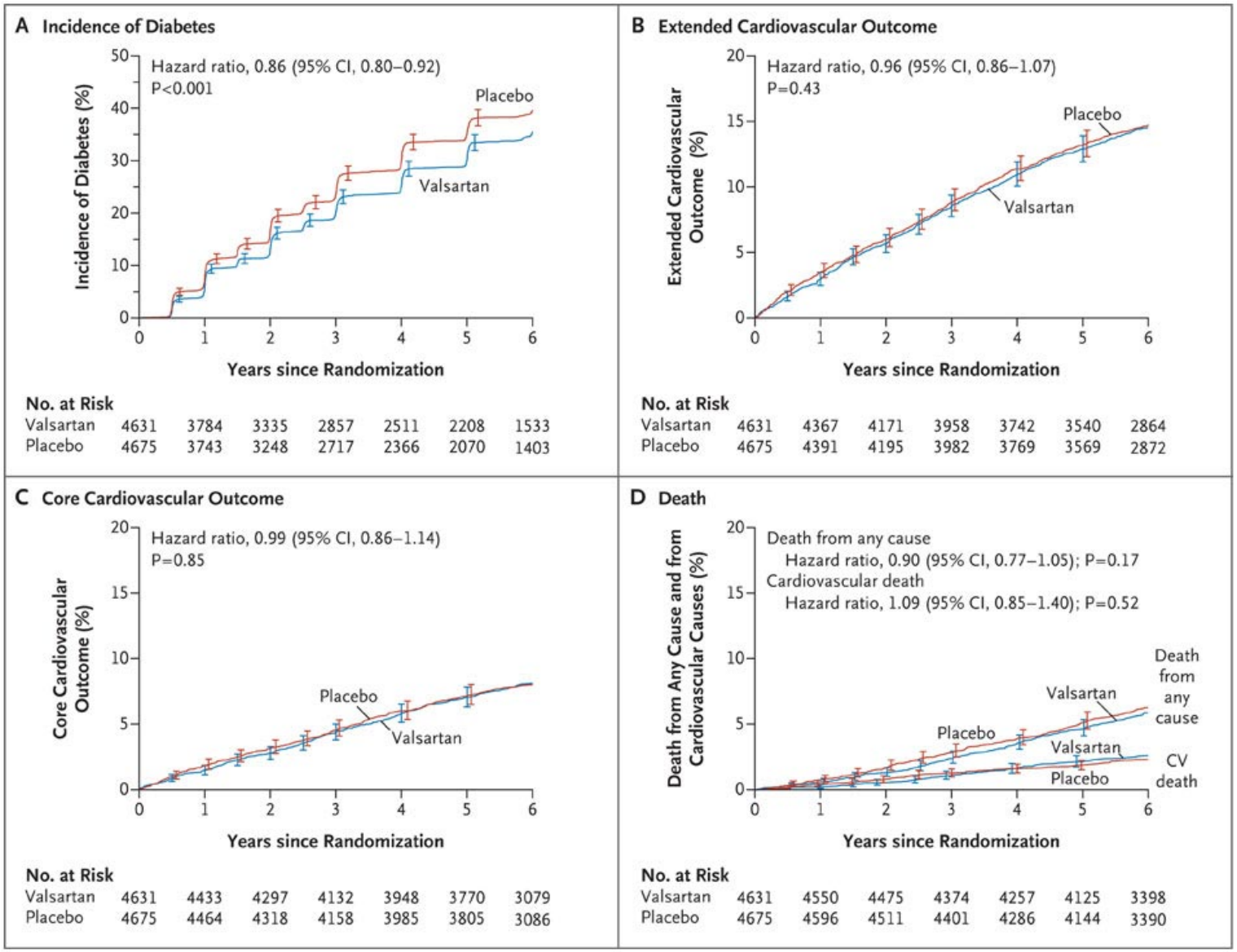
The NAVIGATOR trial: metodología

- Pacientes con intolerancia a la glucosa y enfermedad CV establecida o presencia de otros FRCV
- Tratamiento con cambios en el estilo de vida (todos) y aleatorización a valsartan (hasta 160 mg) o placebo
- Objetivos: incidencia de diabetes, y objetivo compuesto de muerte CV, IAM no fatal, AVC no fatal, hospitalización por IC (o angina inestable, y revascularización coronaria).
- PA inicial: 139/82; PA final: -6,3±14,2 mmHg en brazo valsartan, -3,8±13,8 mmHg en placebo; edad 63 años.
- Seguimiento de 5,0 años para diabetes y 6,5 años para eventos vitales

The NAVIGATOR trial: cambios en PA, peso, perímetro de cintura, y niveles plasmáticos de glucosa



Cuvas de Kaplan–Meier para tres objetivos principales y para mortalidad total



The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Effects of Intensive Blood-Pressure Control in Type 2 Diabetes Mellitus

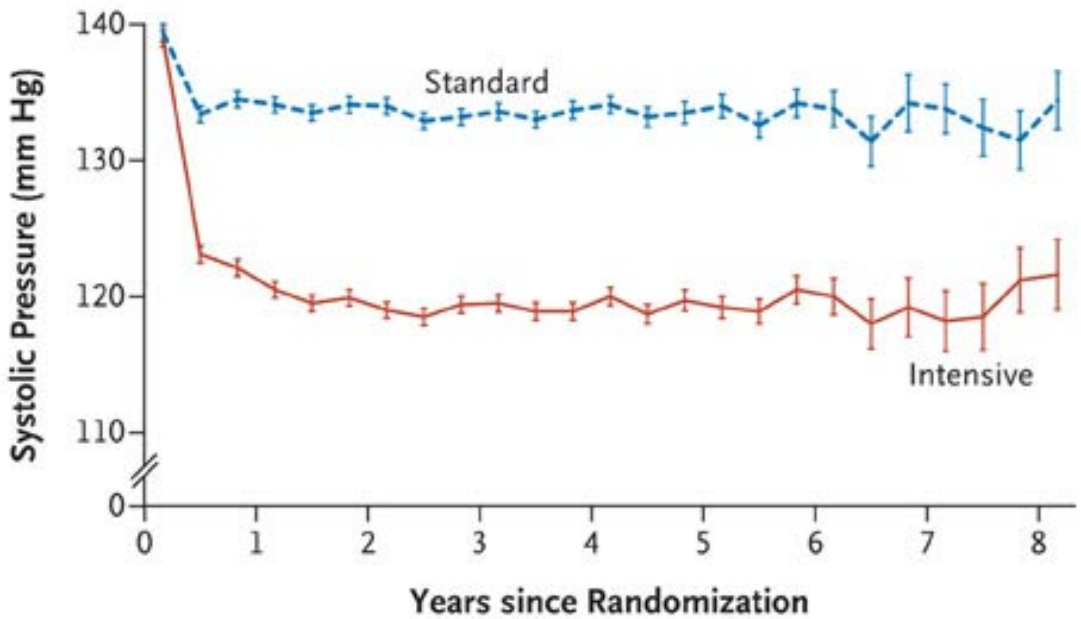
The ACCORD Study Group*

N Engl J Med 2010;362:1575-85.

The ACCORD trial: metodología

- Pacientes con DM2 de ≥40 años y enfermedad CV establecida, o ≥55 años y evidencia de HVE, albuminuria o lesiones arterioesclerosas, o dos FRCV adicionales
- Aleatorización a brazo de tratamiento intensivo (PA <120 mm Hg), y brazo de tratamiento estándar (PA < 140 mm Hg).
- Objetivos: incidencia de primer evento CV mayor (objetivo compuesto de muerte CV, IAM no fatal, AVC no fatal). Objetivos secundarios: id + hospitalización por IC y revascularización coronaria.
- PA inicial: 139/76 mm Hg, edad 62 años
- Seguimiento de 4,7 años

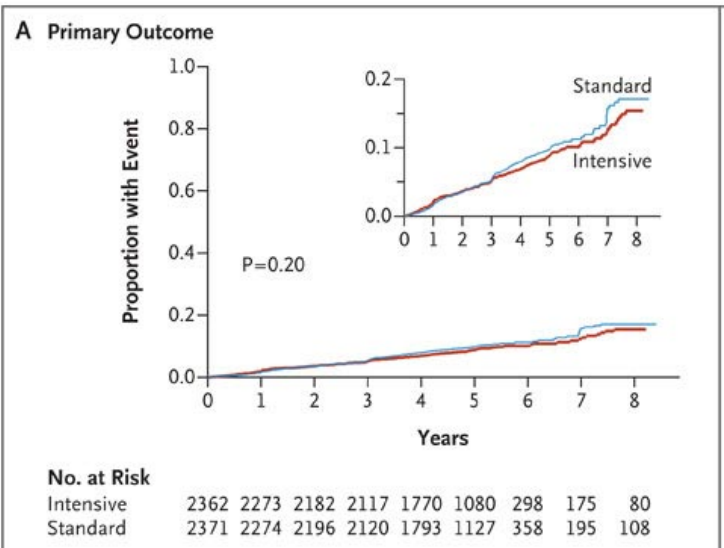
Estudio Accord: niveles de PAS en cada visita del estudio

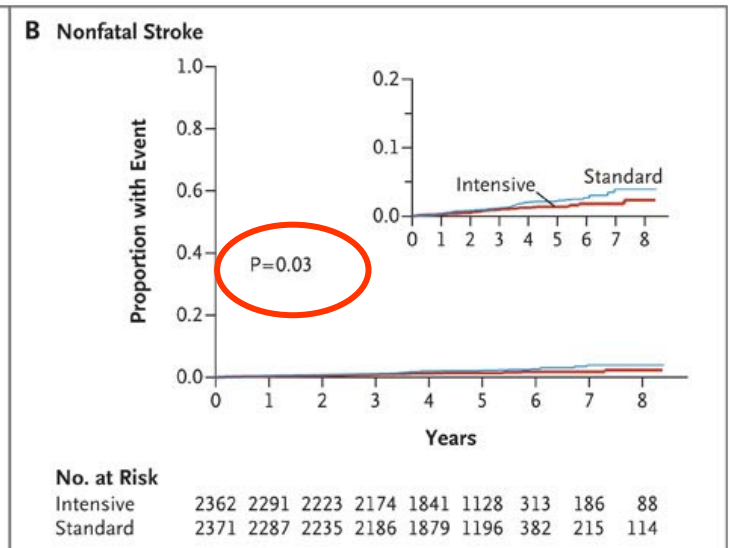


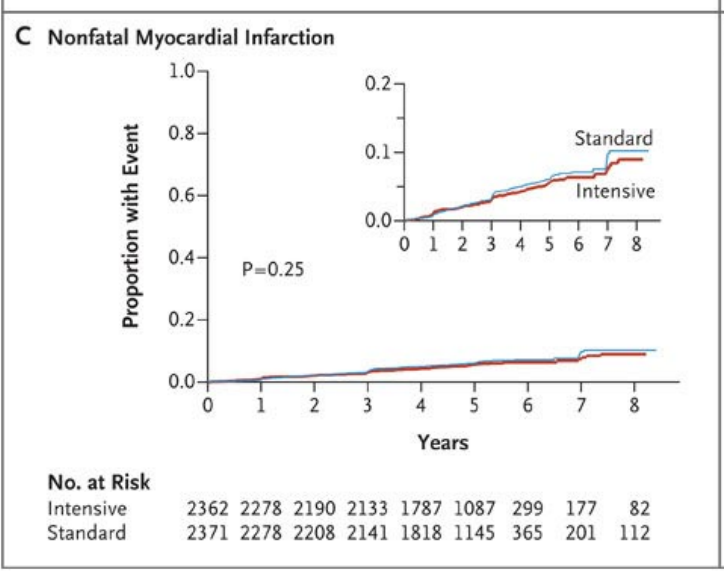
Mean No. of Medications Prescribed								
Intensive	3.2	3.4	3.4	3.5	3.5	3.5	3.4	3.4
Standard	1.9	2.1	2.1	2.2	2.2	2.3	2.3	2.3
No. of Patients								
Intensive	2174	2071	1973	1792	1150	445	156	156
Standard	2208	2136	2077	1860	1241	504	203	201

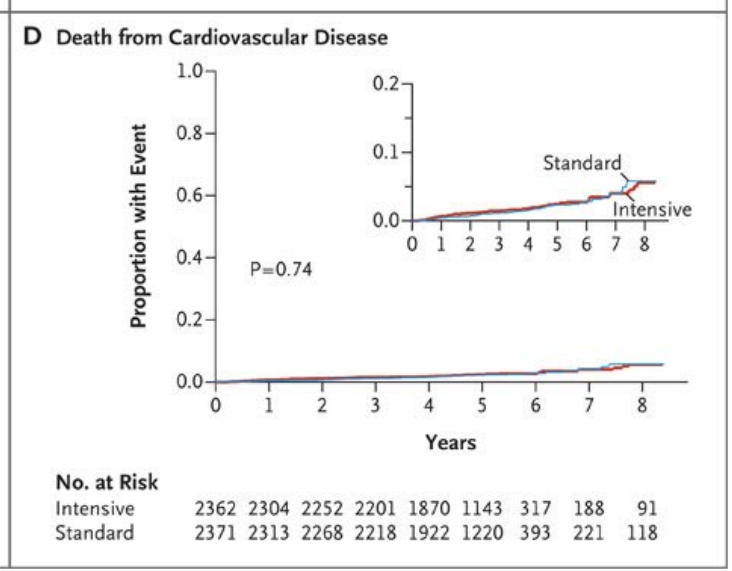
N Engl J Med 2010;362:1575-85.

Estudio Accord: Curvas de Kaplan-Meier para objetivos pre-especificados









N Engl J Med 2010;362:1575-85.

CME Available

Clinical Trial

Target Blood Pressure for Treatment of Isolated Systolic Hypertension in the Elderly

Valsartan in Elderly Isolated Systolic Hypertension Study

Toshio Ogihara, Takao Saruta, Hiromi Rakugi, Hiroaki Matsuoka, Kazuaki Shimamoto, Kazuyuki Shimada, Yutaka Imai, Kenjiro Kikuchi, Sadayoshi Ito, Tanenao Eto, Genjiro Kimura, Tsutomu Imaizumi, Shuichi Takishita, Hirotsugu Ueshima, for the Valsartan in Elderly Isolated Systolic Hypertension Study Group

Abstract—In this prospective, randomized, open-label, blinded end point study, we aimed to establish whether strict blood pressure control (<140 mm Hg) is superior to moderate blood pressure control (≥140 mm Hg to <150 mm Hg) in reducing cardiovascular mortality and morbidity in elderly patients with isolated systolic hypertension. We divided 3260 patients aged 70 to 84 years with isolated systolic hypertension (sitting blood pressure 160 to 199 mm Hg) into 2 groups, according to strict or moderate blood pressure treatment. A composite of cardiovascular events was evaluated for ≥2 years. The strict control (1545 patients) and moderate control (1534 patients) groups were well matched (mean age: 76.1 years; mean blood pressure: 169.5/81.5 mm Hg). Median follow-up was 3.07 years. At 3 years, blood pressure reached 136.6/74.8 mm Hg and 142.0/76.5 mm Hg, respectively. The blood pressure difference between the 2 groups was 5.4/1.7 mm Hg. The overall rate of the primary composite end point was 10.6 per 1000 patient-years in the strict control group and 12.0 per 1000 patient-years in the moderate control group (hazard ratio: 0.89; [95% CI: 0.60 to 1.34]; $P=0.38$). In summary, blood pressure targets of <140 mm Hg are safely achievable in relatively healthy patients ≥70 years of age with isolated systolic hypertension, although our trial was underpowered to definitively determine whether strict control was superior to less stringent blood pressure targets. (***Hypertension*. 2010;56:196-202.**)

Key Words: isolated systolic hypertension ■ elderly ■ blood pressure ■ prognosis ■ valsartan

Estudio VALISH: cambios de PA entre los brazos de reduccíón intensa vs reducción moderada de PA

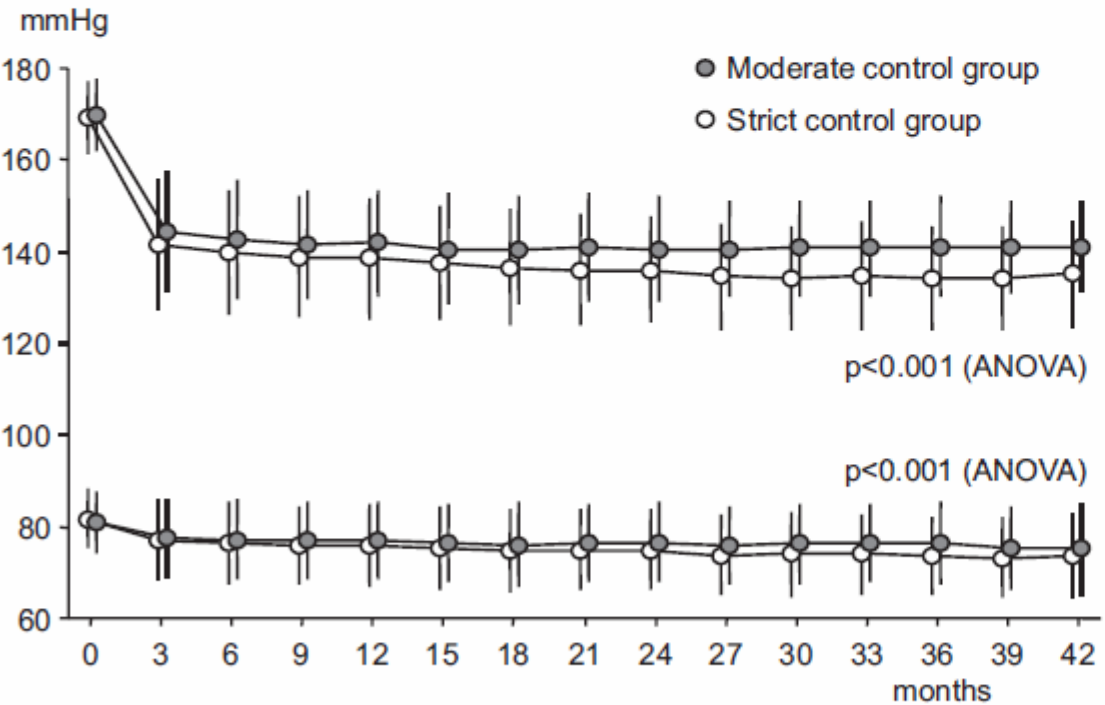


Figure 2. Changes in BP during treatment. The BP differences between the 2 groups were statistically significant during the follow-up period.

Estudio VALISH: Diferencias entre ambos brazos de intervención en cuanto al objetivo primario

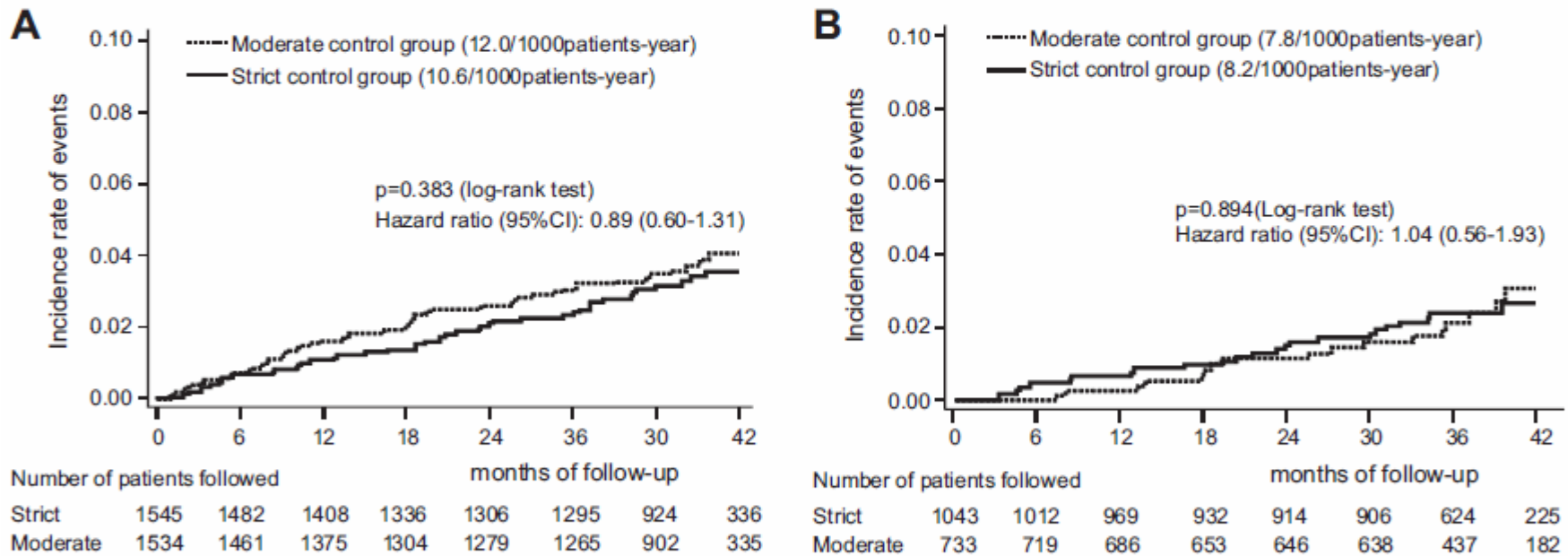


Figure 3. Kaplan-Meier estimates of the primary end point. The primary end point is a composite of sudden death, fatal and nonfatal stroke, fatal and nonfatal myocardial infarction, heart failure death, other cardiovascular death, unplanned hospitalization because of cardiovascular diseases, and renal dysfunction. The hazard ratio was adjusted for the following covariates: sex, age, BMI, smoking, dyslipidemia, diabetes mellitus, and antihypertensive agents used before enrollment. A, Intention-to-treat analysis; B, per-protocol analysis.

Estudio VALISH: Diferencias entre ambos brazos de intervención en cuanto a objetivo 1ª y 2º

	Strict control (N=1545)		Moderate control (N=1534)		p value	Hazard ratio (95% CI)
Primary endpoint						
Composite endpoint [1)]	47	(3.04)	52	(3.39)	0.383	0.89 (0.60-1.31)
Secondary endpoint						
Hard endpoint [2)]	32	(2.07)	37	(2.41)	0.484	0.84 (0.53-1.36)
All cause death	24	(1.55)	30	(1.96)	0.362	0.78 (0.46-1.33)
Cardiovascular death	11	(0.71)	11	(0.72)	0.950	0.97 (0.42-2.25)
Sudden death	6	(0.39)	8	(0.52)	0.564	0.73 (0.25-2.11)
Fatal and non-fatal stroke	16	(1.04)	23	(1.50)	0.237	0.68 (0.36-1.29)
Fatal and non-fatal myocardial infarction	5	(0.32)	4	(0.26)	0.761	1.23 (0.33-4.56)
Unplanned hospitalization	12	(0.78)	14	(0.91)	0.656	0.84 (0.39-1.82)
Renal insufficiency	5	(0.32)	2	(0.13)	0.267	2.45 (0.48-12.64)

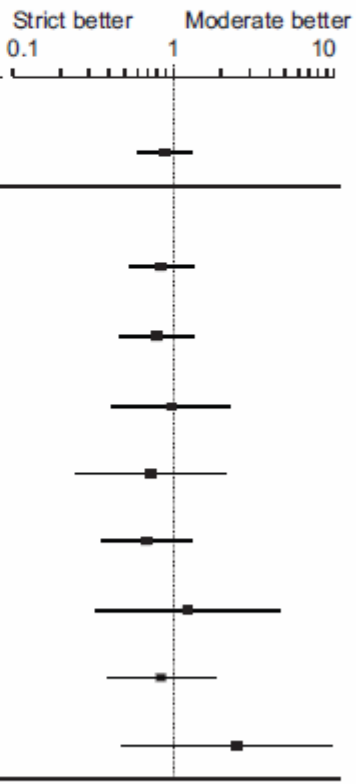


Figure 4. Comparisons of hazard ratios and 95% CIs for the primary end point and secondary end point. Hazard ratio was adjusted for the following covariates: sex, age, BMI, smoking, dyslipidemia, diabetes mellitus, and antihypertensive agents used before enrollment. [1]Data include sudden death, fatal and nonfatal stroke, fatal and nonfatal myocardial infarction, heart failure death, other cardiovascular death, unplanned hospitalization because of cardiovascular diseases, renal dysfunction (doubling of serum creatinine and creatinine, to >2.0 mg per 100 mL, or introduction of dialysis). [2]Data include cardiovascular death, nonfatal stroke (exclude transient ischemic attack), and nonfatal myocardial infarction.

Estudio VALISH: Diferencias entre ambos brazos de intervención en cuanto a objetivo 1ª por subgrupos

Subgroup	Strict control Events/Pt	(%)	Moderate control Events/Pt	(%)	p value	Hazard ratio (95%CI)	Heterogeneity p value
Sex							
Male	24/582	(4.12)	18/573	(3.14)	0.390	1.31 (0.71-2.41)	0.101
Female	23/963	(2.39)	34/961	(3.54)	0.125	0.66 (0.39-1.13)	
Age							
< 75	12/620	(1.94)	16/613	(2.61)	0.421	0.74 (0.35-1.56)	0.763
≥ 75	35/925	(3.78)	36/921	(3.91)	0.832	0.95 (0.60-1.51)	
BMI							
< 25 kg/m^2	32/1023	(3.13)	32/1060	(3.02)	0.951	1.02 (0.62-1.66)	0.068
≥ 25 kg/m^2	13/496	(2.62)	19/443	(4.29)	0.176	0.62 (0.31-1.25)	
Antihypertensive treatment at randomization							
No	19/787	(2.41)	19/755	(2.52)	0.906	0.96 (0.51-1.82)	0.675
Yes	28/758	(3.69)	33/779	(4.24)	0.524	0.85 (0.51-1.41)	
Diabetes							
No	30/1334	(2.25)	38/1346	(2.82)	0.327	0.79 (0.49-1.27)	0.737
Yes	17/211	(8.06)	14/188	(7.45)	0.894	1.05 (0.52-2.13)	
Dyslipidemia							
No	31/950	(3.26)	27/973	(2.77)	0.575	1.16 (0.69-1.94)	0.100
Yes	16/595	(2.69)	25/561	(4.46)	0.105	0.60 (0.32-1.12)	
Chronic kidney disease							
No	15/687	(2.18)	21/668	(3.14)	0.266	0.69 (0.35-1.34)	0.479
Yes	26/477	(5.45)	24/467	(5.14)	0.891	1.04 (0.60-1.81)	

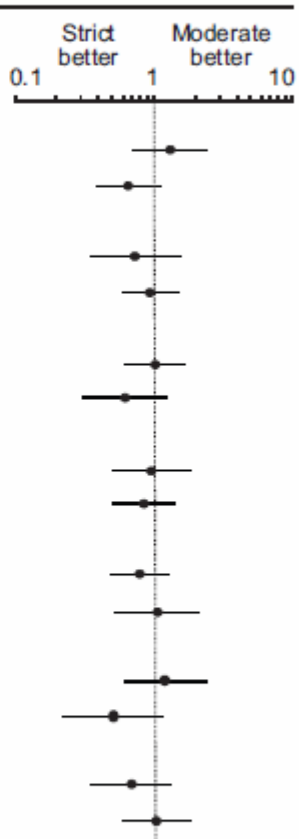


Figure 5. Comparisons of hazard ratios and 95% CIs for primary end point in each prespecified subgroup. Hazard ratio was adjusted for covariates: sex, age, BMI, smoking, dyslipidemia, diabetes mellitus, and antihypertensive agents used before enrollment. [1]Data show the number of events/number of patients.

Tratamiento hipotensor en el ictus agudo

The angiotensin-receptor blocker candesartan for treatment of acute stroke (SCAST): a randomised, placebo-controlled, double-blind trial

Else Charlotte Sandset, Philip M W Bath, Gudrun Boysen, Dalius Jatuzis, Janika Körv, Stephan Lüders, Gordon D Murray, Przemyslaw S Richter, Risto O Roine, Andreas Terént, Vincent Thijs, Eivind Berge, on behalf of the SCAST Study Group

Lancet 2011; 377: 74

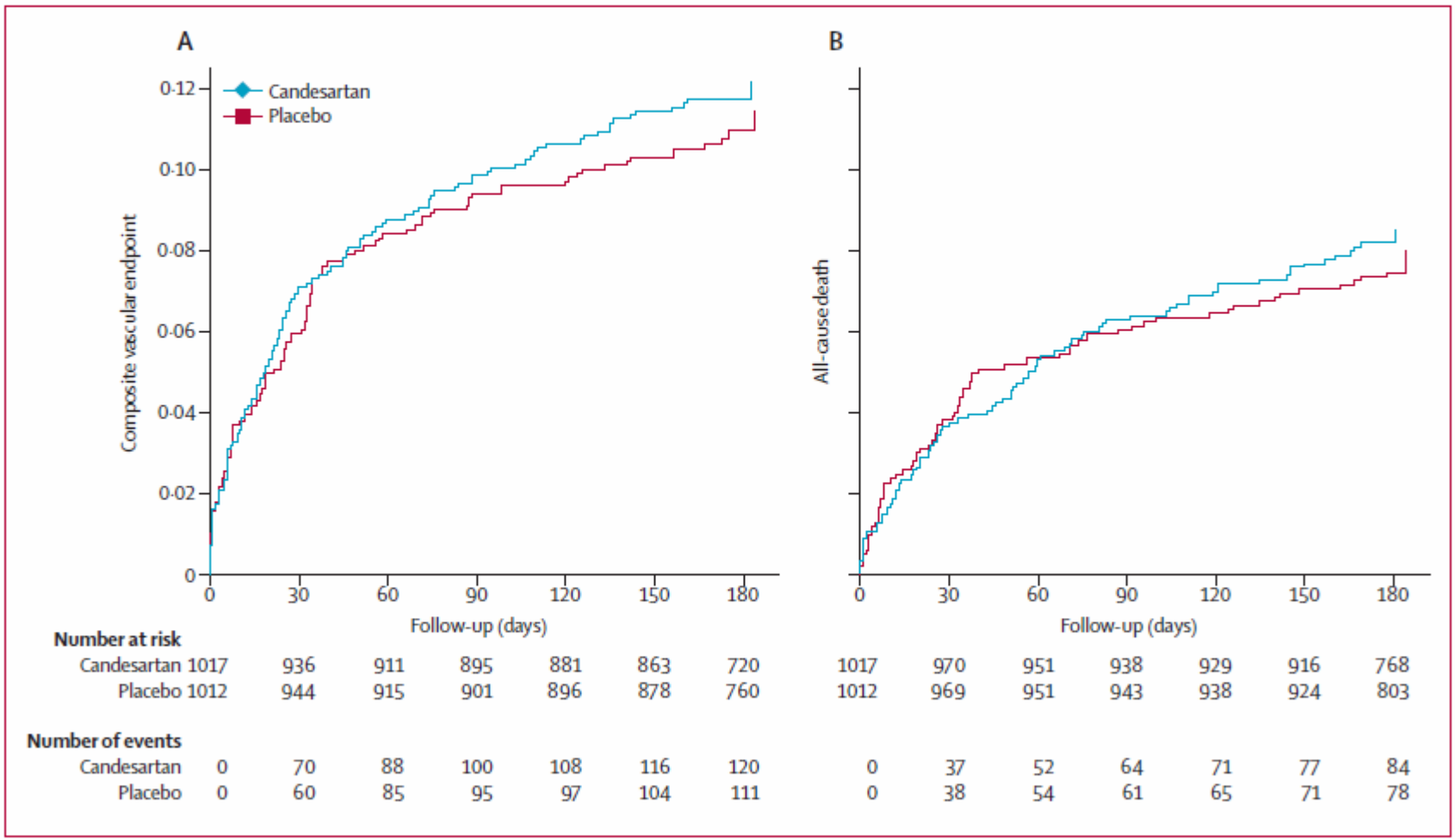


Figure 3: Cumulative risk of (A) vascular death, non-fatal stroke, or non-fatal myocardial infarction and (B) death from any cause during 6 months' follow-up

ARAII y cancer

Articles

Angiotensin-receptor blockade and risk of cancer: meta-analysis of randomised controlled trials

Ilke Sipahi, Sara M Debanne, Douglas Y Rowland, Daniel I Simon, James C Fang

Lancet Oncology, June 14 2010 (online)

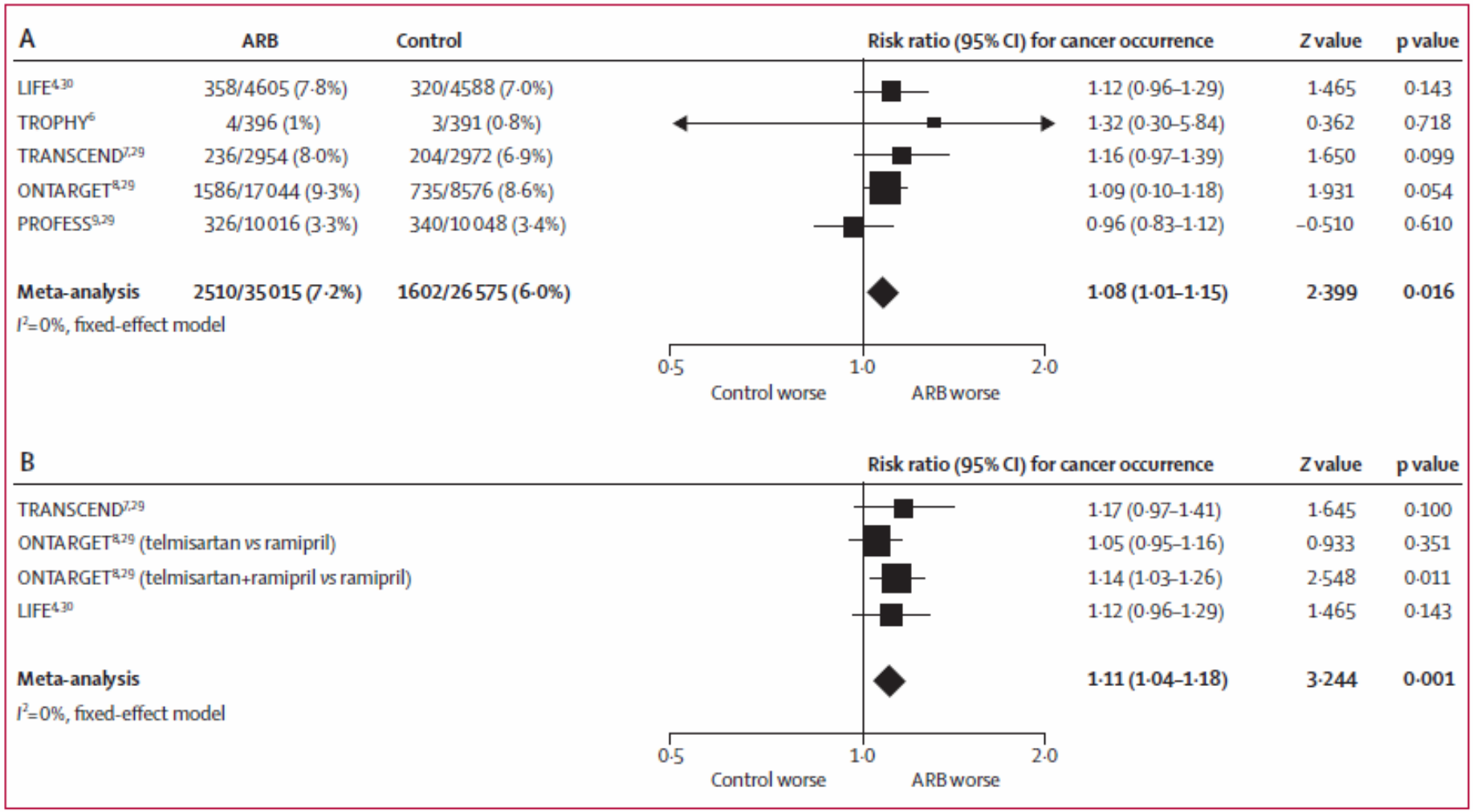


Figure 3*: Cancer occurrence reported in all included trials of angiotensin-receptor blockers (A) and trials in which cancer was a prespecified endpoint (B)
ARB=angiotensin-receptor blocker. *To obtain the meta-analytic risk ratio, hazard ratios from the ONTARGET and TRANSCEND trials were combined with the risk ratio from the LIFE trial.

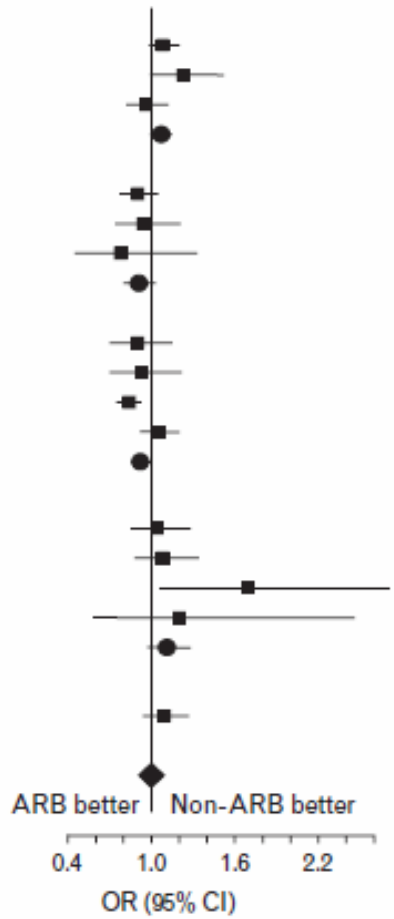
Effects of telmisartan, irbesartan, valsartan, candesartan, and losartan on cancers in 15 trials enrolling 138 769 individuals

The ARB Trialists Collaboration

Journal of Hypertension 2011, 29:623–635

Fig. 1

	No. events/No. randomized ARB	Non-ARB	OR(95%CI)	*P*-value for Difference	Heterogeneity
Telmisartan trials					
ONTARGET*	1297/15965 (8.12%)	606/ 8029 (7.55%)	1.08 (0.98–1.20)		
TRANSCEND*	200/ 2806 (7.13%)	166/ 2826 (5.87%)	1.23 (0.99–1.52)		
PROFESS	326/10016 (3.25%)	340/10048 (3.38%)	0.96 (0.82–1.12)		
Subtotal	1823/28787 (6.33%)	1112/20903 (5.32%)	1.07 (0.99–1.15)	0.096	0.168
Irbesartan trials trials					
ACTIVE I	336/ 4518 (7.44%)	368/ 4498 (8.18%)	0.90 (0.77–1.05)		
I-PRESERVE	130/ 2064 (6.30%)	137/ 2062 (6.64%)	0.94 (0.74–1.21)		
IDNT	25/ 577 (4.33%)	31/ 563 (5.51%)	0.78 (0.45–1.33)		
Subtotal	491/ 7159 (6.86%)	536/ 7123 (7.52%)	0.91 (0.80–1.03)	0.125	0.810
Valsartan trials					
Val-HeFT	130/ 2506 (5.19%)	143/ 2494 (5.73%)	0.90 (0.70–1.15)		
VALIANT*	144/ 9534 (1.51%)	78/ 4788 (1.63%)	0.93 (0.70–1.22)		
VALUE	669/ 7622 (8.78%)	782/ 7576 (10.32%)	0.84 (0.75–0.93)		
NAVIGATOR	498/ 4580 (10.87%)	481/ 4621 (10.41%)	1.05 (0.92–1.20)		
Subtotal	1441/24242 (5.94%)	1484/19479 (7.62%)	0.92 (0.85–0.99)	0.022	0.077
Candesartan trials					
CHARM-overall*	192/ 3533 (5.43%)	186/ 3553 (5.24%)	1.04 (0.85–1.28)		
SCOPE	195/ 2477 (7.87%)	180/ 2460 (7.32%)	1.08 (0.88–1.34)		
DIRECT(all)	47/ 2610 (1.80%)	28/ 2614 (1.07%)	1.69 (1.06–2.71)		
TROPHY	17/ 395 (4.30%)	14/ 386 (3.63%)	1.20 (0.58–2.46)		
Subtotal	451/ 9015 (5.00%)	408/ 9013 (4.53%)	1.11 (0.97–1.28)	0.135	0.308
Losartan trial					
LIFE	343/ 4605 (7.45%)	316/ 4588 (6.89%)	1.09 (0.93–1.27)		
Grand total	4549/73808 (6.16%)	3856/61106 (6.31%)	1.00 (0.95–1.04)	0.886	0.014



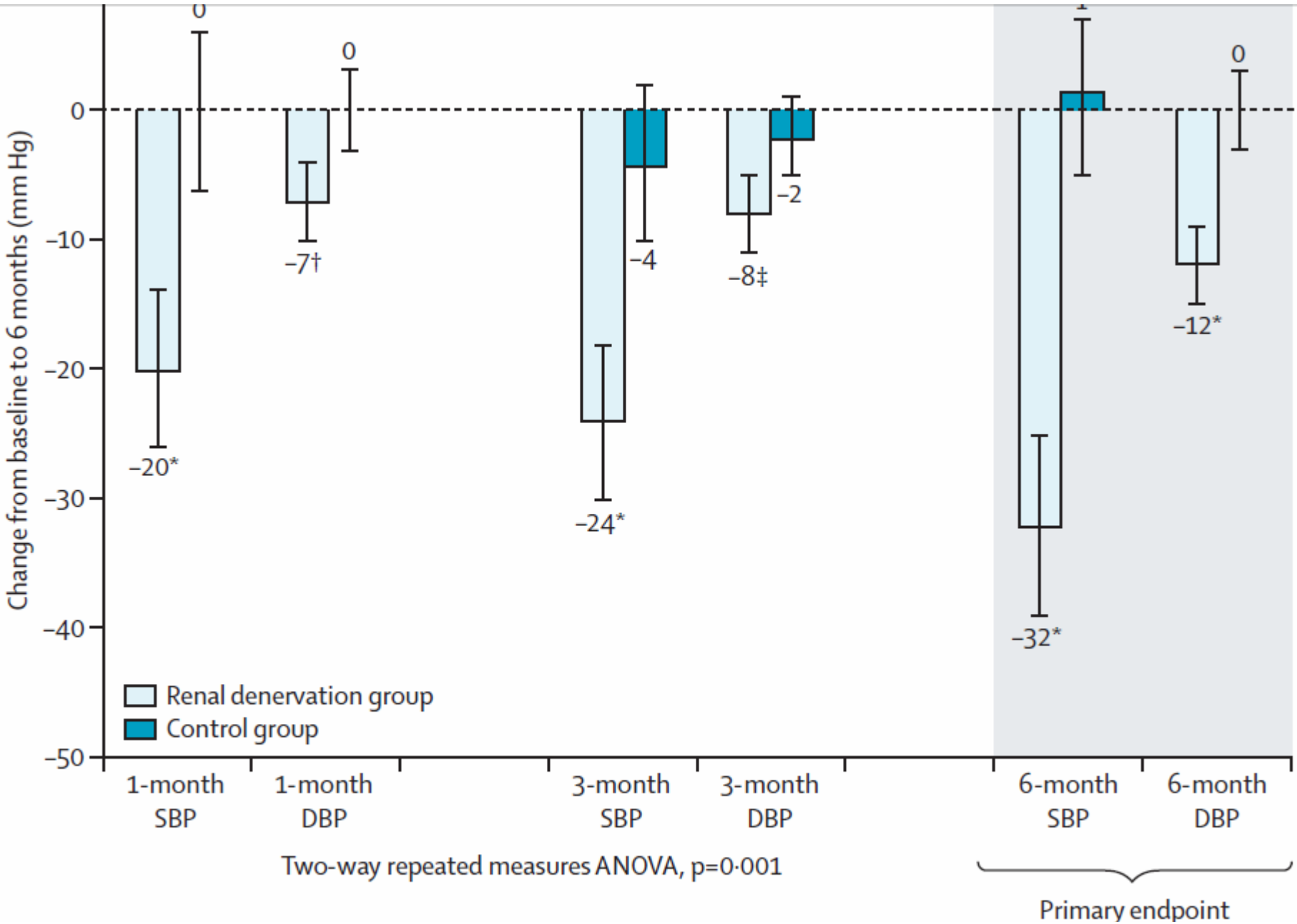
Incidence of cancers, odds ratios, and 95% confidence intervals, by angiotensin II receptor blocker (ARB) versus non-ARB controls, overall and in each of the 15 ARB trials. CI, confidence interval; OR, odds ratio. *Included were patients who were cancer free at baseline.

Hipertensión refractaria: nuevas estrategias terapéuticas

Lancet 2010; 376: 1903–09

Renal sympathetic denervation in patients with treatment-resistant hypertension (The Symplicity HTN-2 Trial): a randomised controlled trial

*Symplicity HTN-2 Investigators**


Change from baseline to 6 months (mm Hg)
0
−10
−20
−30
−40
−50
0
0
−20*
−7†
−24*
−4
−8‡
−2
−32*
−12*
Renal denervation group
Control group
1-month SBP
1-month DBP
3-month SBP
3-month DBP
6-month SBP
6-month DBP
Two-way repeated measures ANOVA, p=0·001
Primary endpoint

	Change in systolic blood pressure (mm Hg)	Change in diastolic blood pressure (mm Hg)	Office-based minus home-based (mm Hg)	Home-based minus 24-h ambulatory (mm Hg)	Office-based minus 24-h ambulatory (mm Hg)
Renal denervation					
Office-based (n=49)	−32 (23)	−12 (11)	..	..	..
Home-based (n=32)	−20 (17)	−12 (11)	..	..	..
24-h ambulatory (n=20)	−11 (15)	−7 (11)	..	..	..
Absolute difference	..	..	12/0	9/5	21/5
Control					
Office-based (n=51)	1 (21)	0 (10)	..	..	..
Home-based (n=40)	2 (13)	0 (7)	..	..	..
24-h ambulatory (n=25)	−3 (19)	−1 (12)	..	..	..
Absolute difference	..	..	1/0	−5/−1	−4/−1

Data are mean (SD).

Table: Intragroup comparison of blood-pressure assessment by means of office-based, home-based, and 24-h ambulatory blood pressure monitoring at 6-month follow-up visit within treatment groups

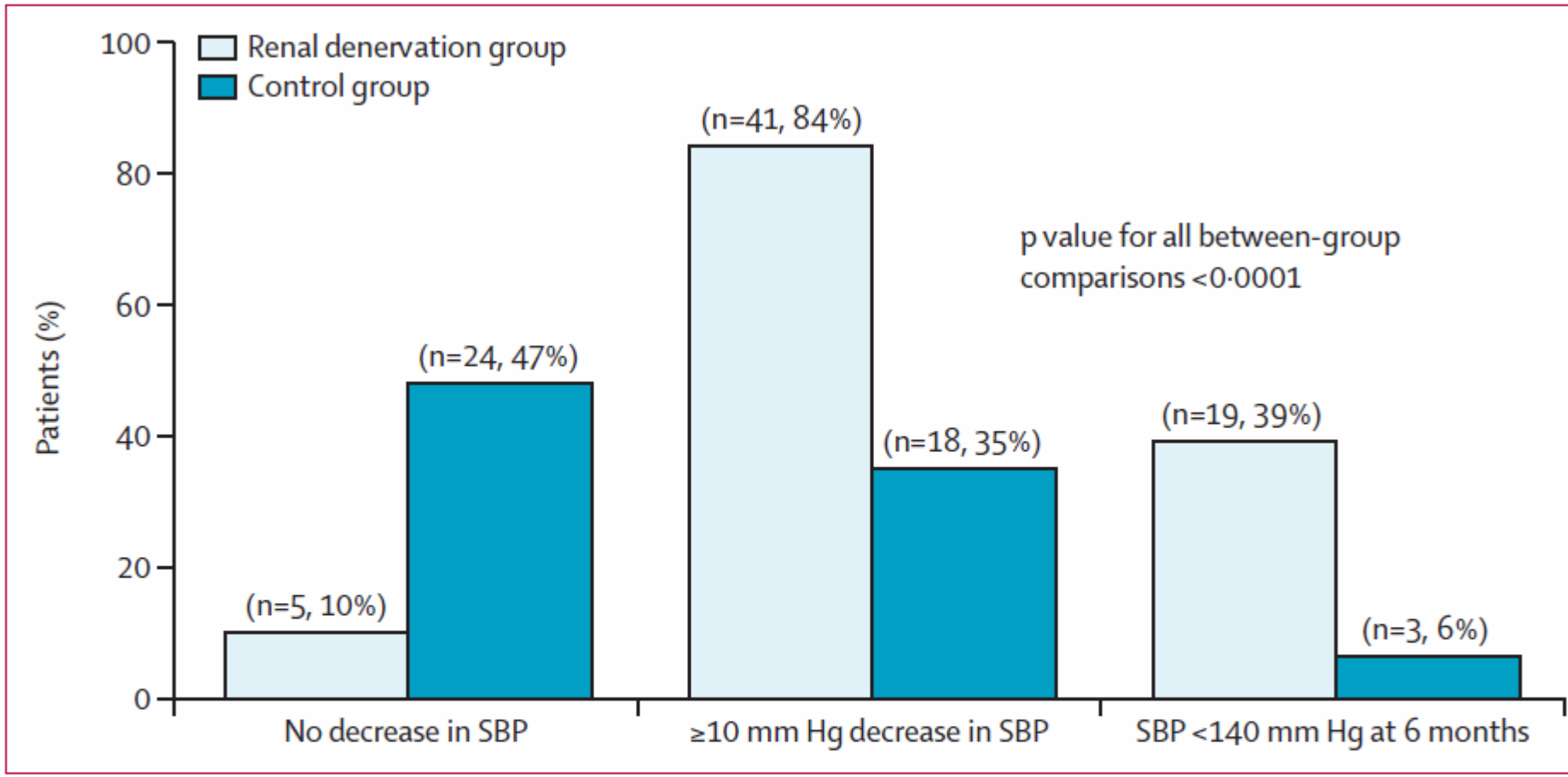
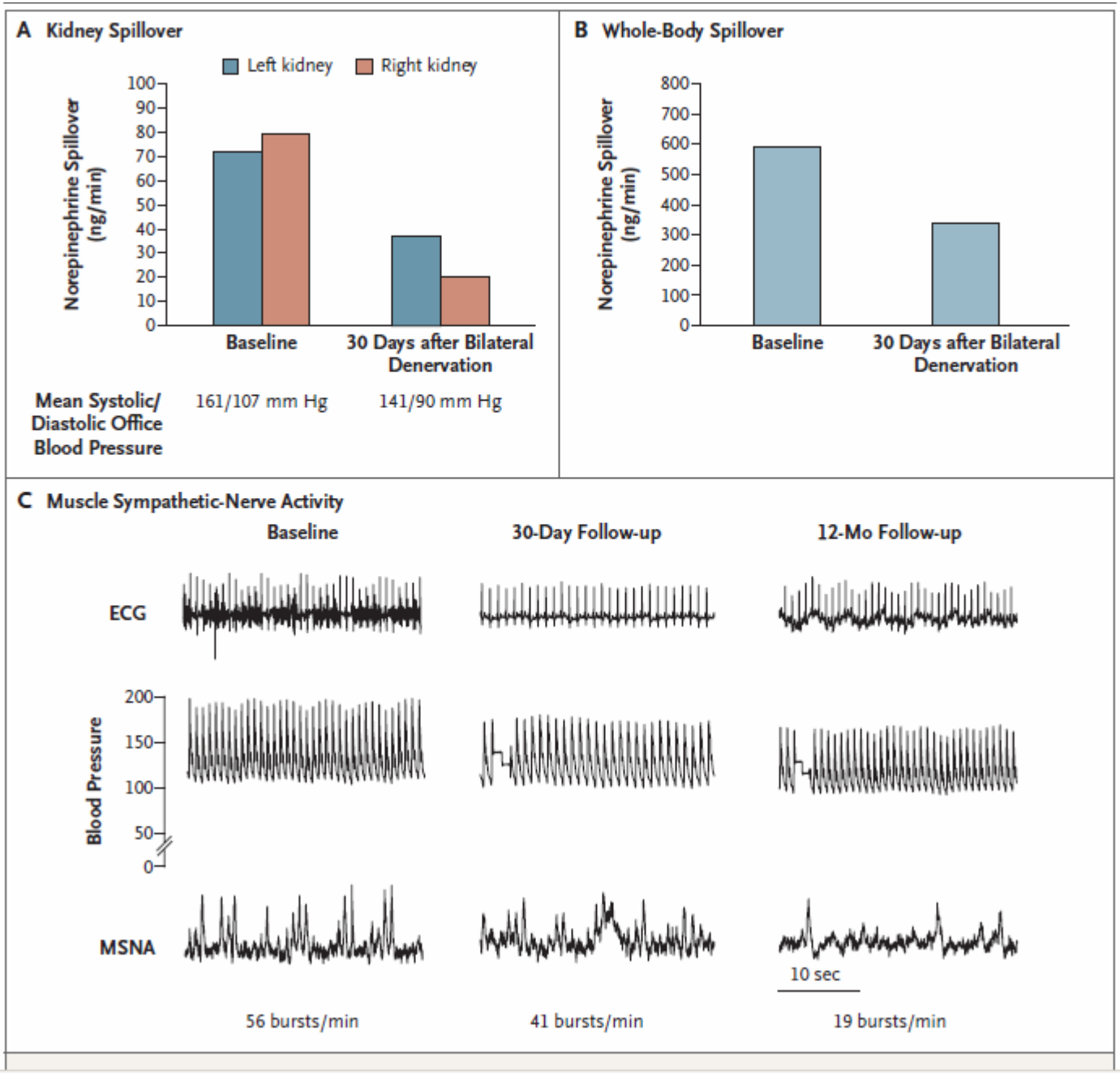


Figure 3: **Proportion of patients in the renal denervation and control groups that at 6 months had no decrease in systolic blood pressure, a 10 mm Hg or greater decrease in SBP, or achieved a SBP of less than 140 mm Hg**

SBP=systolic blood pressure.

Postprocedure office BPs were reduced by 20/10, 24/11, 25/11, 23/11, 26/14, and 32/14 mm Hg at 1, 3, 6, 12, 18, and 24 months
Hypertension, March 14, 2011



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Novel Baroreflex Activation Therapy in Resistant Hypertension

Results of a European Multi-Center Feasibility Study

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Maastricht, the Netherlands; Bern, Switzerland; Hannover, Berlin, Bad Oeynhausen, and Essen, Germany; Hradec Kralove, Czech Republic; Riga, Latvia; and Gdansk, Poland

Table 2 Blood Pressure Results, Mean Change (Δ) Presented for Office and Ambulatory Readings

	Δ 3 Months	Δ 1 Year	Δ 2 Years
Office blood pressure	n = 37	n = 26	n = 17
SBP, mm Hg	−21 ± 4 ($p < 0.001$)	−30 ± 6 ($p < 0.001$)	−33 ± 8 ($p = 0.001$)
DBP, mm Hg	−12 ± 2 ($p < 0.001$)	−20 ± 4 ($p < 0.001$)	−22 ± 6 ($p = 0.002$)
HR, beats/min	−8 ± 2 ($p < 0.001$)	−8 ± 2 ($p = 0.001$)	−11 ± 4 ($p = 0.008$)
Ambulatory blood pressure	n = 26	n = 15	n = 8
SBP, mm Hg	−6 ± 3 ($p = 0.102$)	−13 ± 3 ($p < 0.001$)	−24 ± 8 ($p = 0.017$)
DBP, mm Hg	−4 ± 2 ($p = 0.041$)	−8 ± 2 ($p = 0.001$)	−13 ± 5 ($p = 0.049$)
HR, beats/min	−5 ± 2 ($p = 0.001$)	−6 ± 2 ($p = 0.012$)	−11 ± 34 ($p = 0.005$)

Values are mean change ± SE.

Abbreviations as in Table 1.

¡¡Qué podemos concluir de todo esto!!