

Objetivos terapéuticos en el paciente con alto riesgo vascular

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Unidad de Medicina Interna



**Fundación
Hospital Alcorcón**





Objetivos terapéuticos en el paciente con alto riesgo vascular- GUION

- ¿Qué significa 'alto riesgo vascular'?
 - Riesgo vascular: bajo / alto / **muy alto**
- Objetivos de control
 - HTA
 - Dislipemia
- Otras medidas: antiagregación
- Valoración global – tratamiento global



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¿Qué pacientes son de 'alto riesgo'?

- Elevación marcada de **un factor de riesgo**
 - HTA > 180/100
 - Hiperlipemias genéticas (HFH)
- Estimación del '**riesgo global**'
 - >20% Riesgo coronario Framingham
 - >5% Mortalidad CV (SCORE)
- Prevención secundaria
 - Pacientes '**de muy alto riesgo**'



Objetivos de control

- Elevación marcada de **un factor de riesgo**
 - Control del FR aislado
- Alto '**riesgo global**'
 - Objetivo GLOBAL: REDUCIR EL RIESGO
 - Acción sobre **TODOS** LOS FACTORES DE RIESGO
- Prevención secundaria
 - Pacientes '**de muy alto riesgo**'
 - Acción intensa sobre **TODOS** los FR



0 5 10 15 20 25 30

Alto Riesgo Clínico

**Riesgo CV
estimado**



**Intensidad de
tratamiento**



**Objetivo
Riesgo CV**

Reducir riesgo

Reducir riesgo CV 5-años a < 15%



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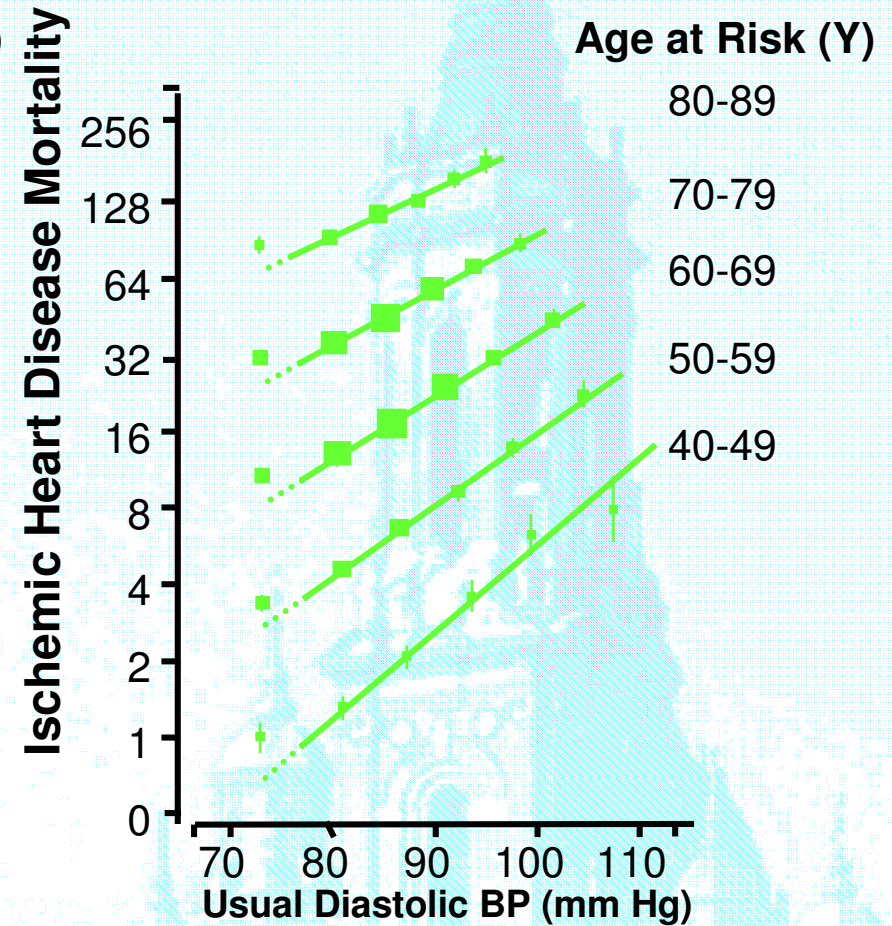
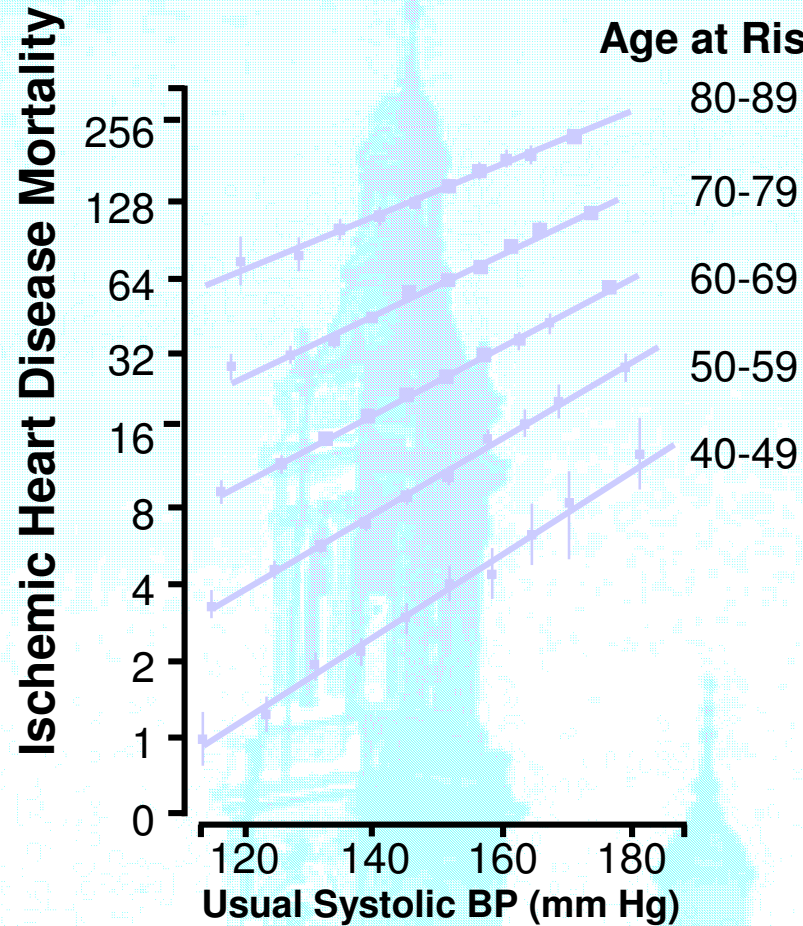
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Blood Pressure: Lower is Better

a meta-analysis of individual data for one million adults in 61 prospective studies

Ischemic Heart Disease Mortality





Bajar la presión ¿con qué fármacos?

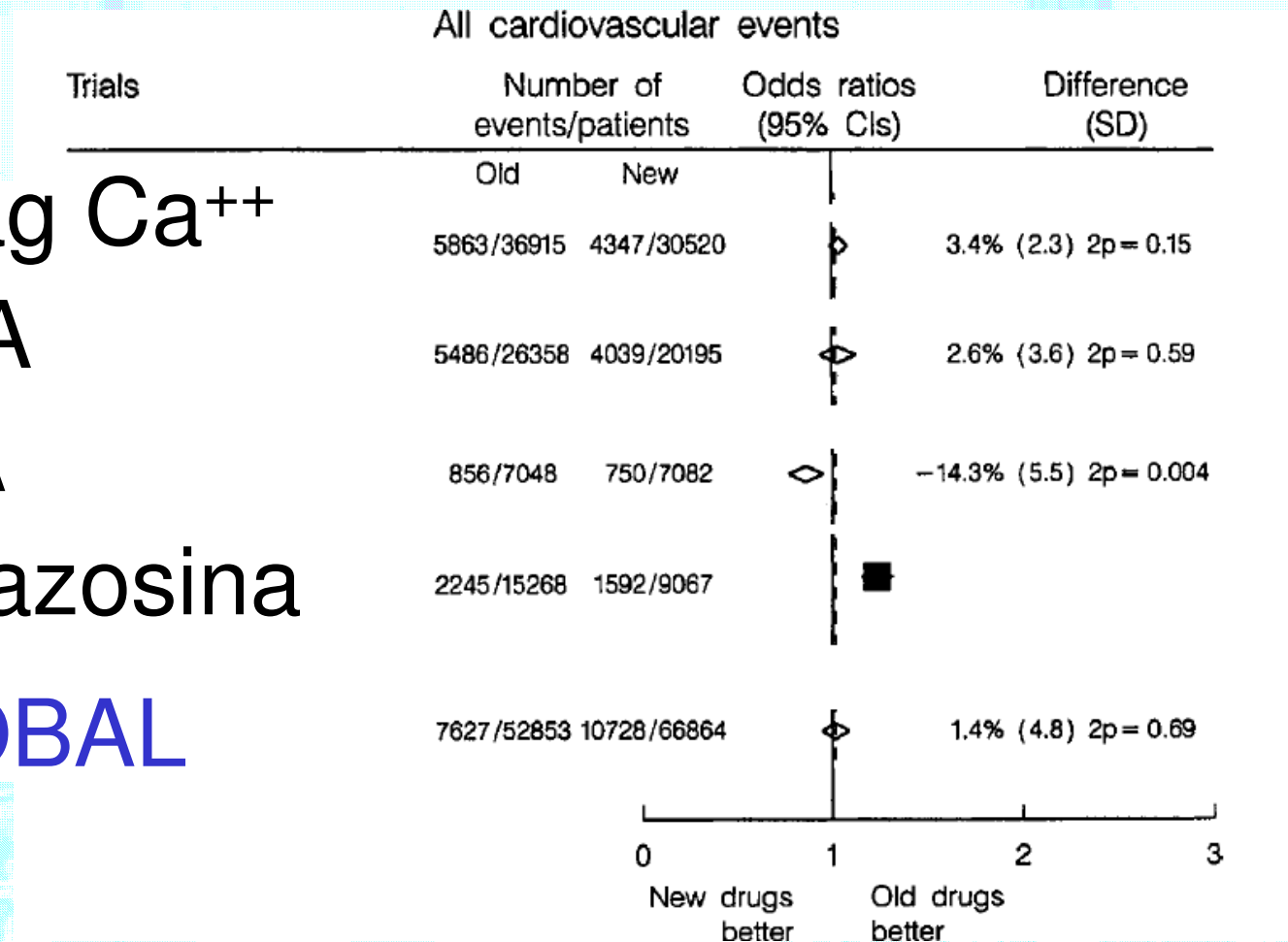
Antag Ca^{++}

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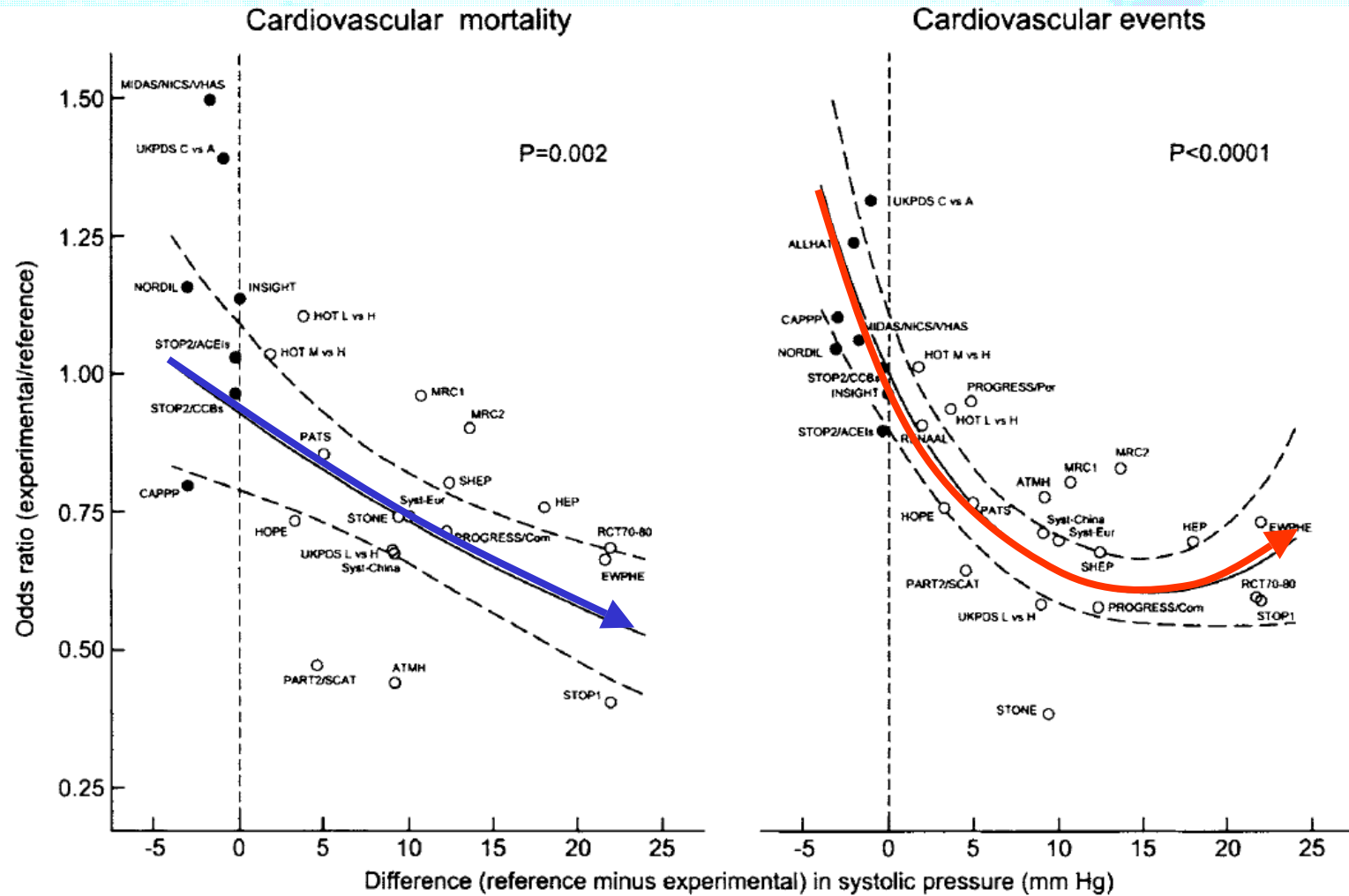
GLOBAL





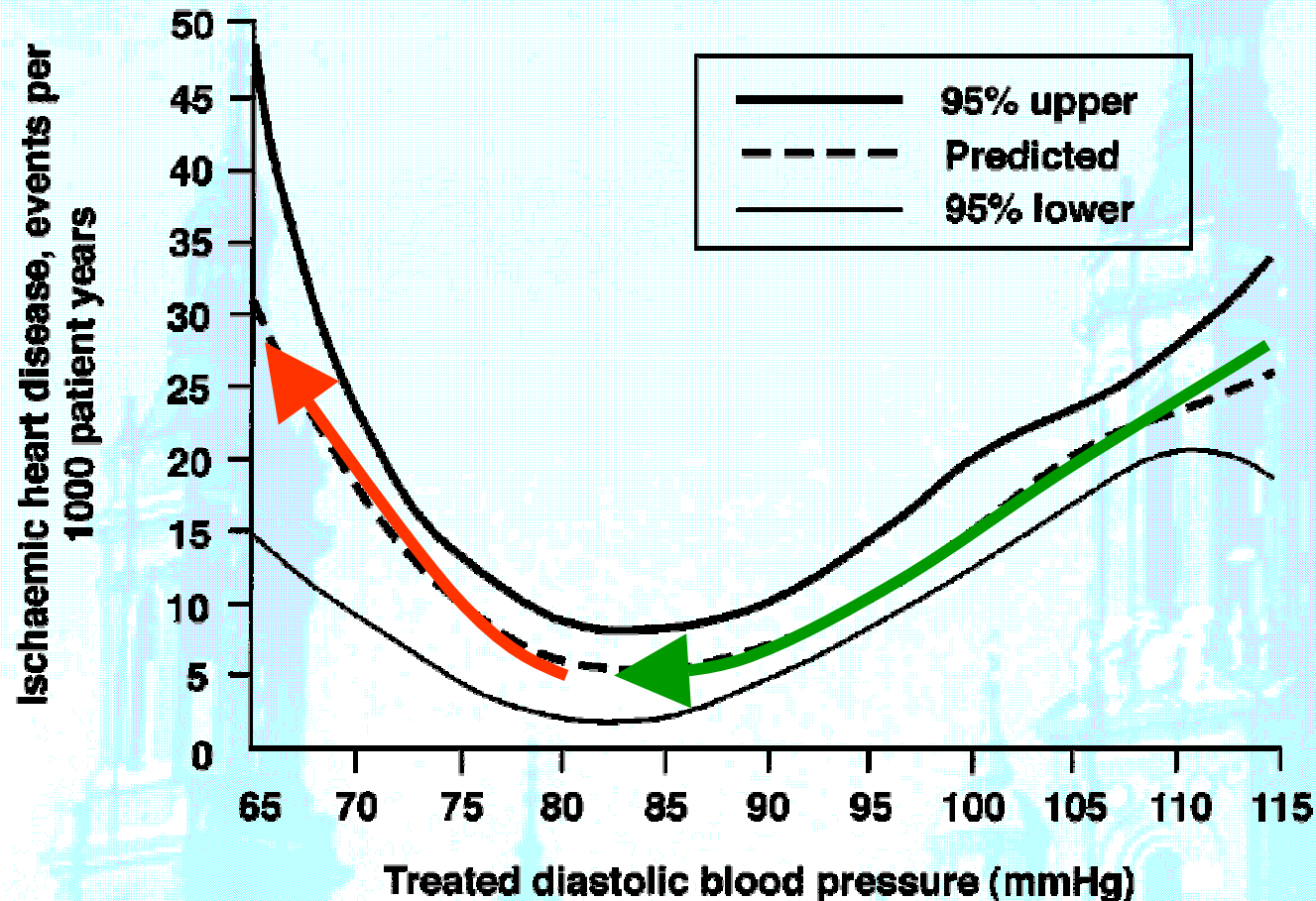
Bajar la presión ¿cuánto?

Blood Pressure Reduction and Cardiovascular Prevention: An Update Including the 2003–2004 Secondary Prevention Trials





The J-curve phenomenon and the treatment of hypertension.

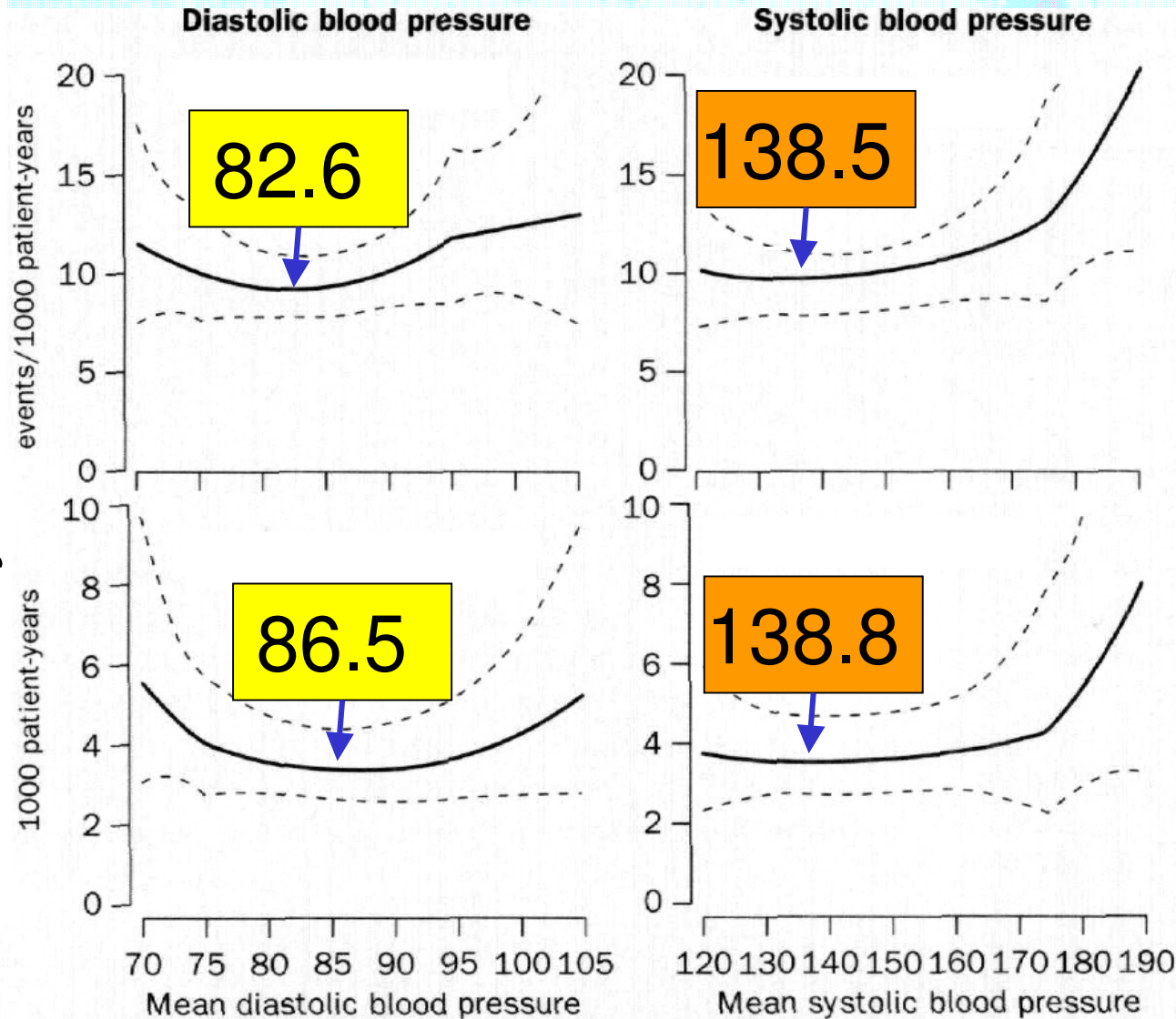




HOT Outcomes by Target Blood Pressure Group*

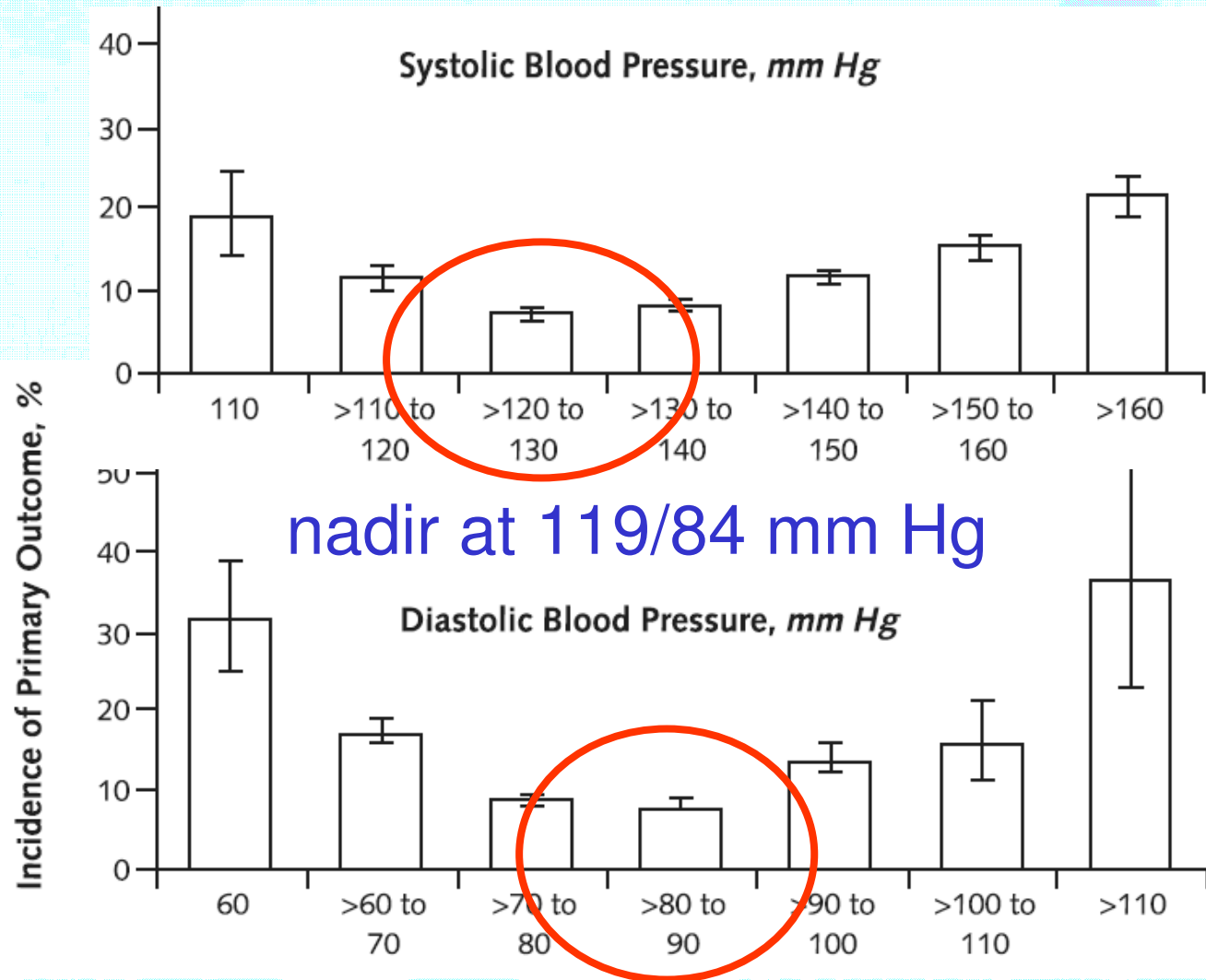
CV Events

CV Mortality





Defining the J-Curve in Hypertension and Coronary Artery Disease





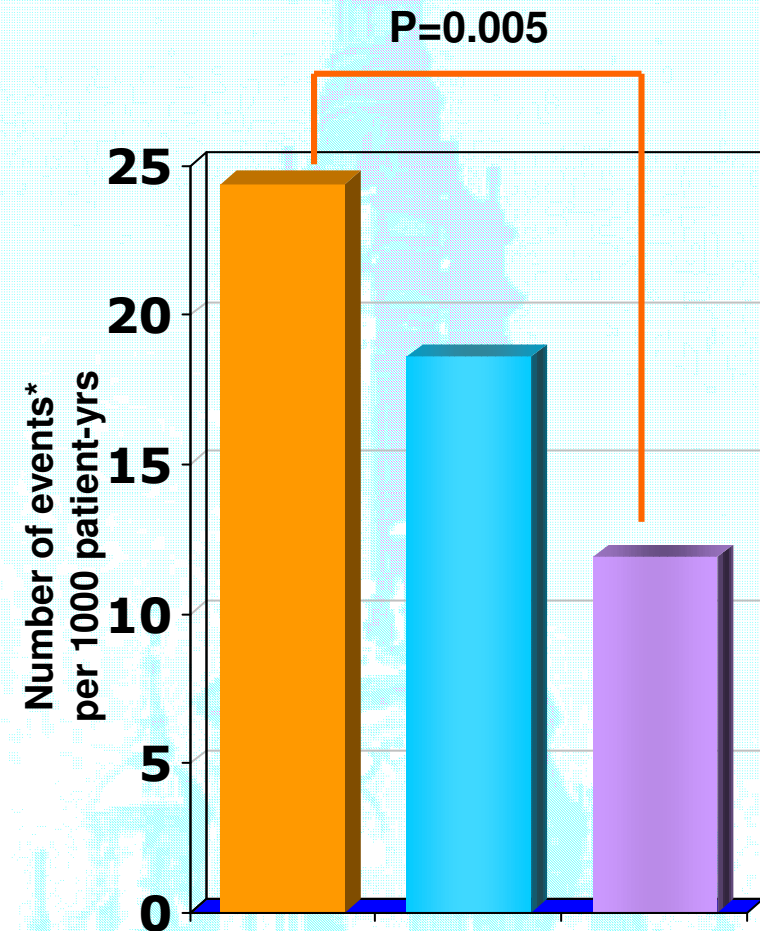
HOT Diabetic Subgroup

Reduction in Cardiovascular Events

Target diastolic BP (mmHg)	Achieved [†] systolic BP (mmHg)	Achieved [†] diastolic BP (mmHg)	# of patients with diabetes
■ ≤ 90	143.7	85.2	501
■ ≤ 85	141.4	83.2	501
■ ≤ 80	139.7	81.1	499

[†]mean of all blood pressures for all study patients in BP subgroups from 6 months of follow-up to end of study

*Includes all myocardial infarction, all strokes, and all other cardiovascular deaths





Impact of Blood Pressure Reduction on Mortality in Diabetes

Trial	Conventional care	Intensive care	Risk reduction	P-value
UKPDS	154/87	144/82	32%	0.019
HOT	144/85	140/81	66%	0.016

Mortality endpoints are:

UK Prospective Diabetes Study (UKPDS) – “diabetes related deaths”

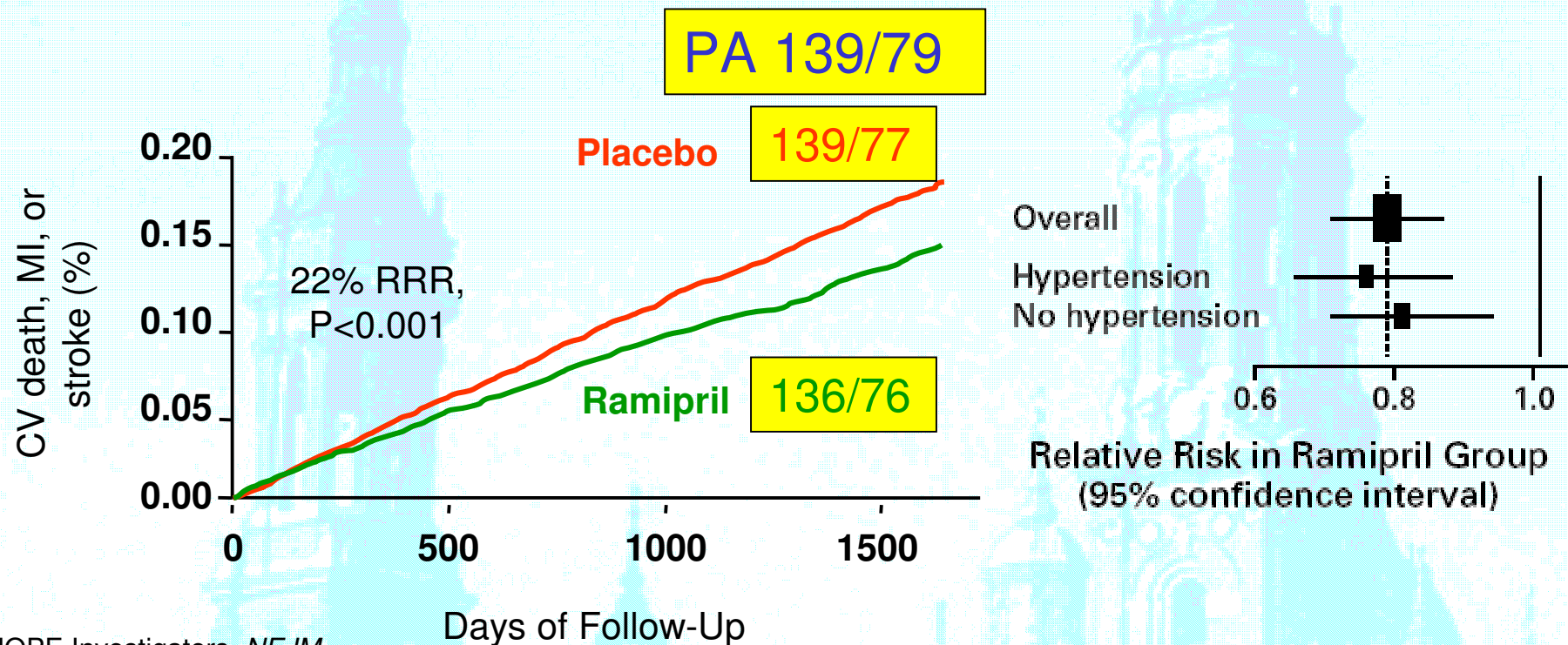
Hypertension Optimal Treatment (HOT) Study – “cardiovascular deaths” in diabetics



ACE Inhibitor Evidence: CAD, CVD, PVD or DM

Heart Outcomes Prevention and Evaluation (HOPE) Study

9,297 patients with DM or vascular disease plus one additional CV risk factor, but without HF or known LVSD randomized to ramipril (10 mg) or placebo for 5 years



HOPE Investigators. *NEJM*
2000;342:145-153



ACE-I=Angiotensin converting enzyme inhibitors, DM=Diabetes mellitus,
CV=Cardiovascular, HF=Heart failure, LVSD=Left ventricular systolic dysfunction,
MI=Myocardial infarction

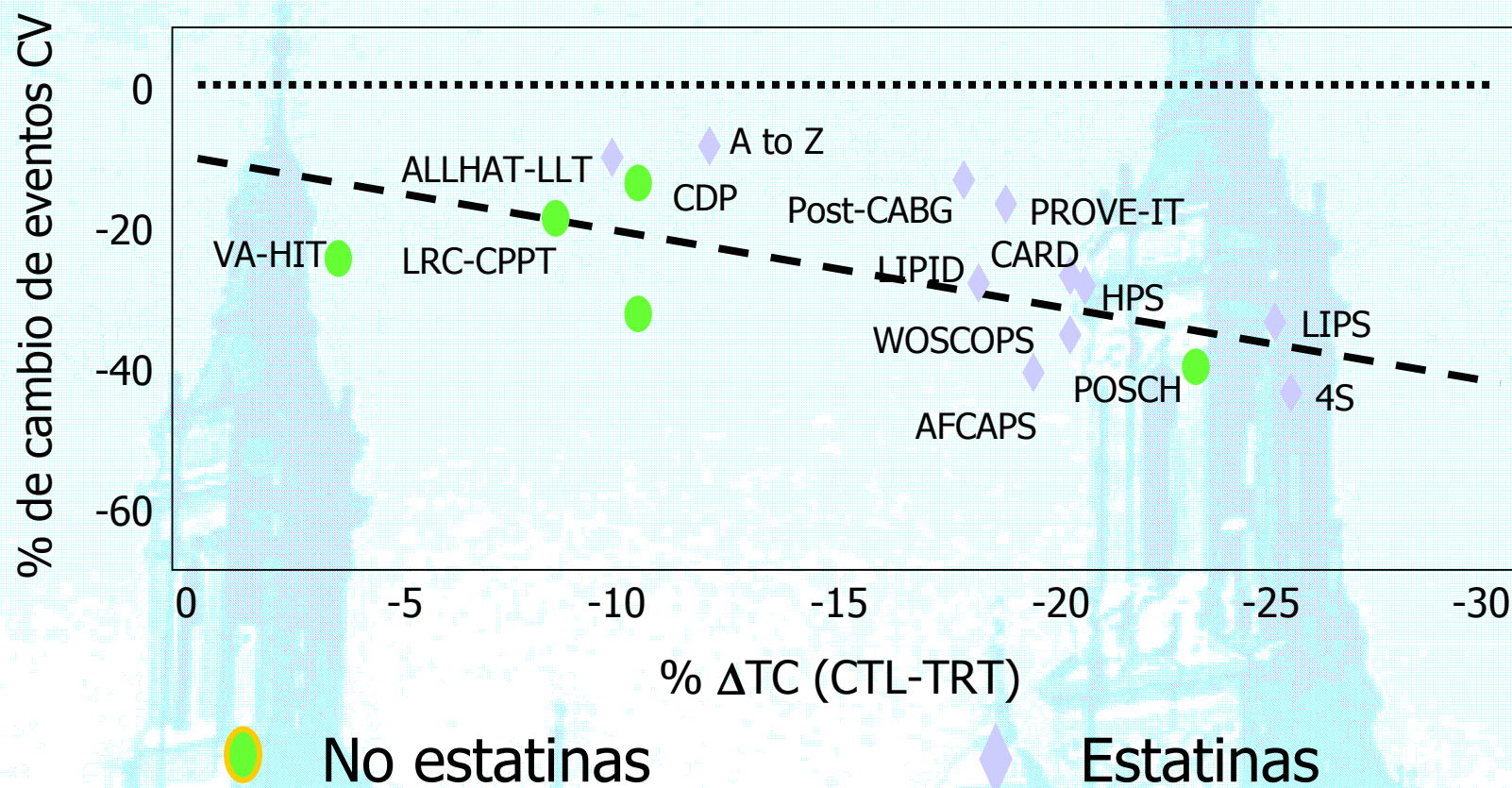


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Relacion entre % descenso del colesterol y enfermedad coronaria. Meta-análisis

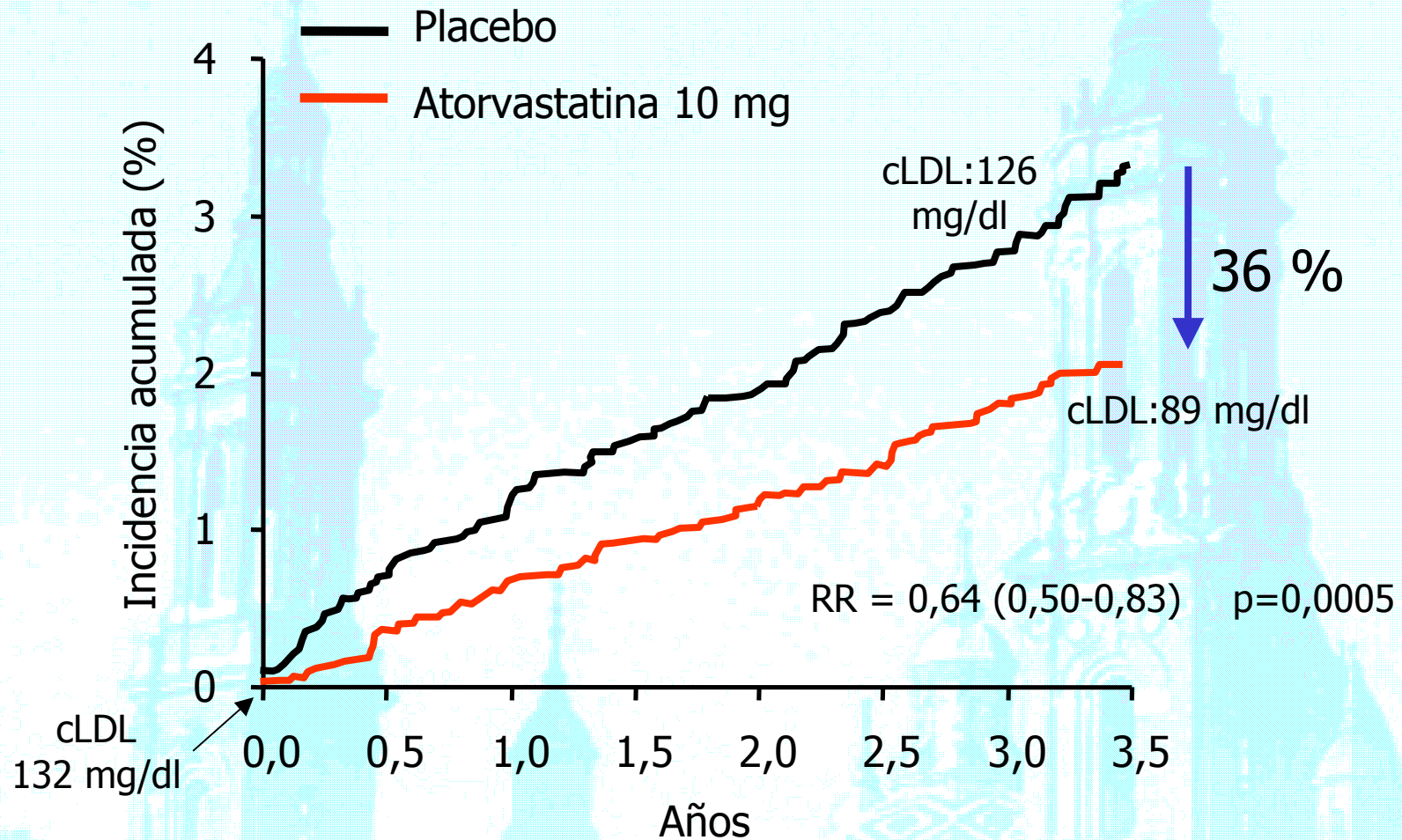


VA-HIT Veterans Affairs High-Density Lipoprotein Intervention Trial; **LRC-CPPT**, Lipids Research Clinics Coronary Primary Prevention Trial; **A to Z**, Aggrastat to Zocor; **CDP**, Coronary Drug Project; **HHS**, Health and Human Services; **CARE**, Cholesterol and Recurrent Events; **POSCH**, Program on the Surgical Control of the Hyperlipidemias; **ASCOT-LLA**, Anglo-Scandinavian Cardiac Outcomes Trial-Lipid Lowering Arm; **LIPS**, Lescol Intervention Prevention Study; **4S**, Scandinavian Simvastatin Survival Study.



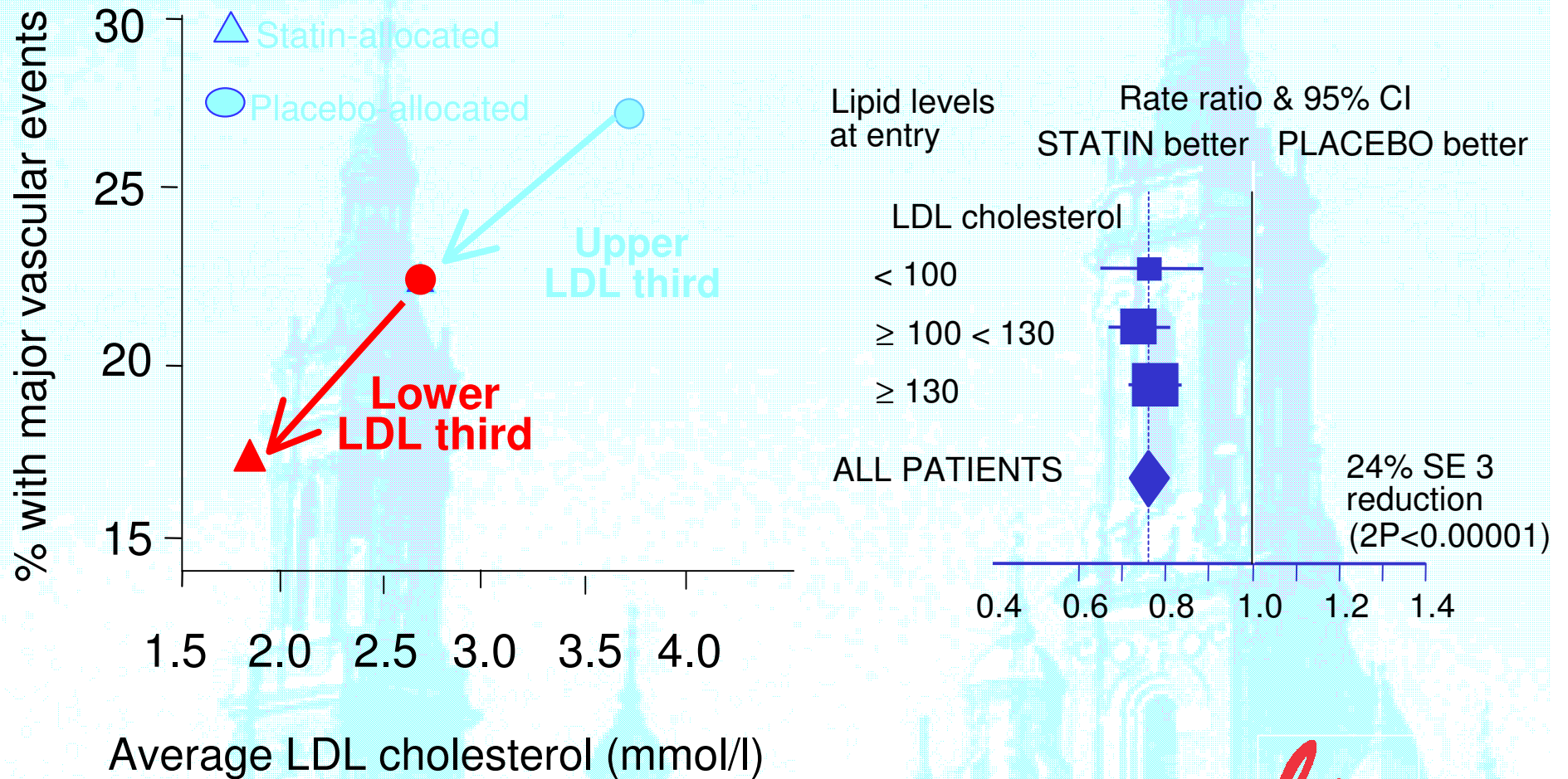
ASCOT-LLA IAM no mortal y muerte por EC

Población: 10305 hipertensos + 3 FR vascular (incluye ictus y PVP)



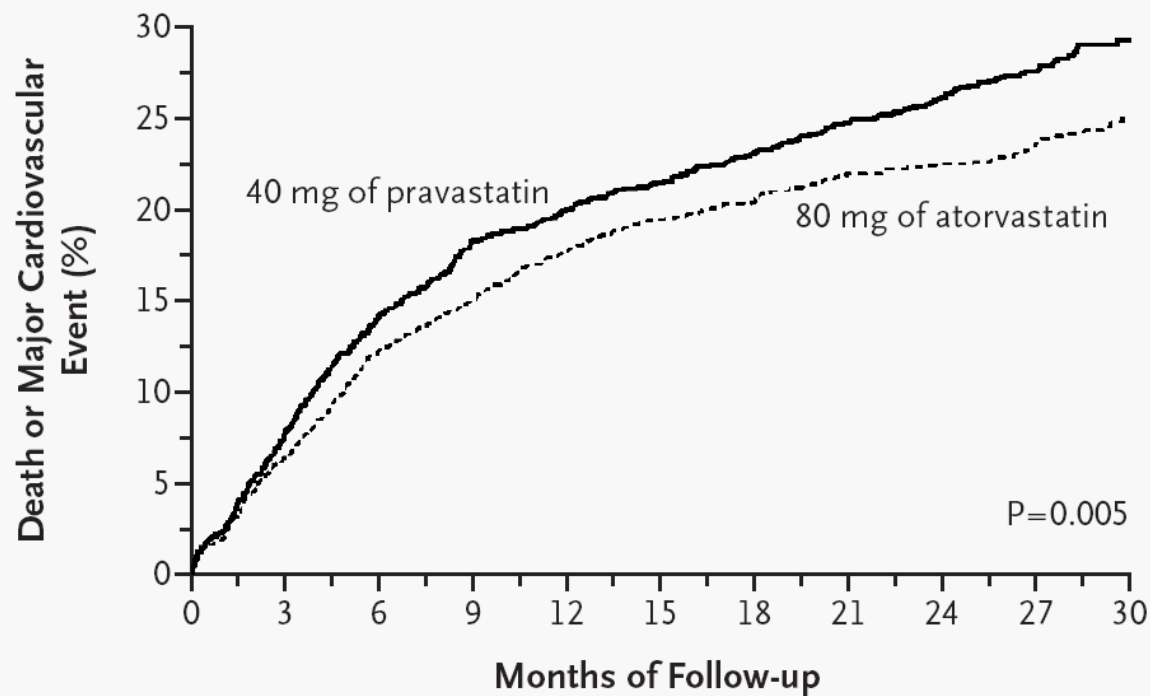


SIMVASTATIN: MAJOR VASCULAR EVENT in upper & lower thirds of baseline LDL





Reduction in Death or Major Cardiovascular Event with Intensive Statin Therapy



No. at Risk

Pravastatin	2063	1688	1536	1423	810	138
Atorvastatin	2099	1736	1591	1485	842	133

Figure 2. Kaplan–Meier Estimates of the Incidence of the Primary End Point of Death from Any Cause or a Major Cardiovascular Event.



PROVE IT: Pravastatin or Atorvastatin Evaluation and Infection Therapy

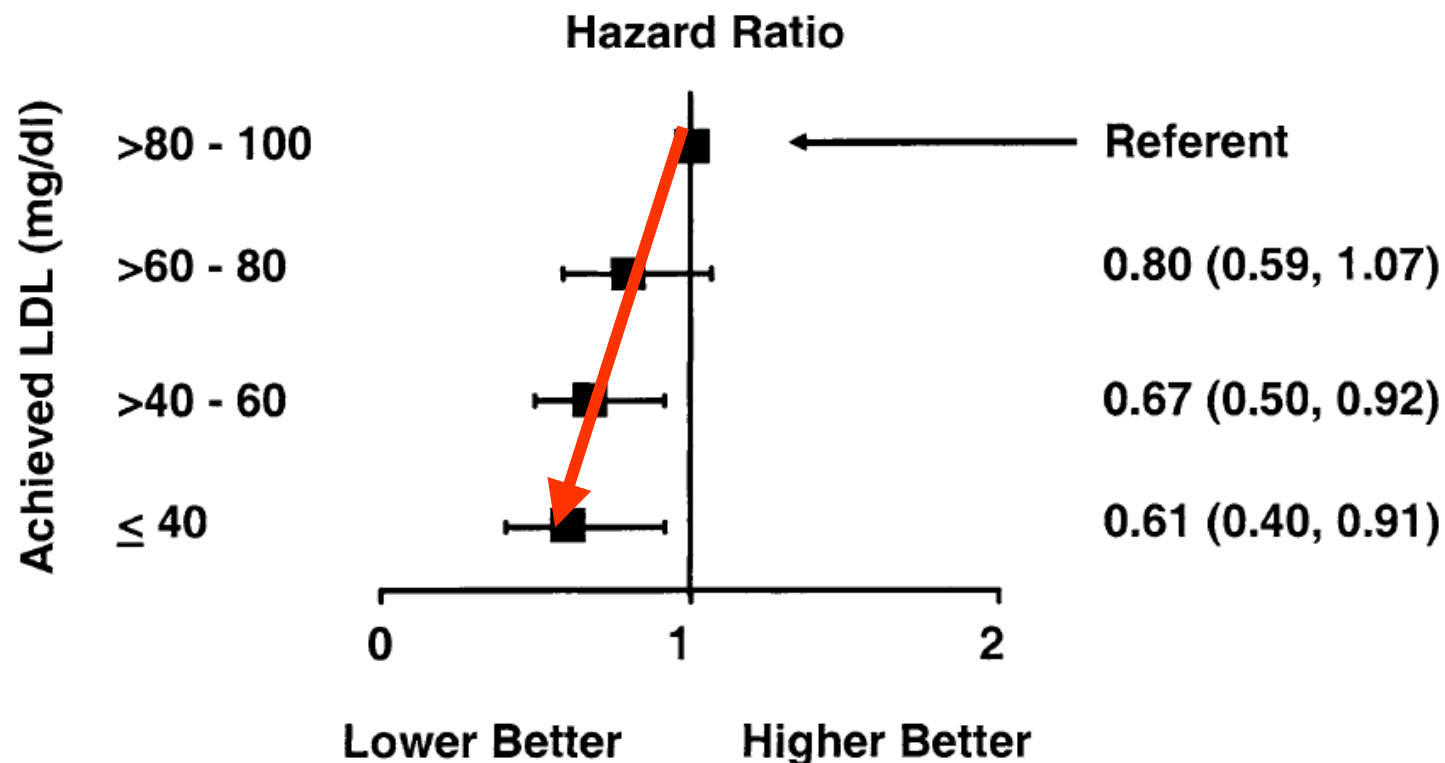
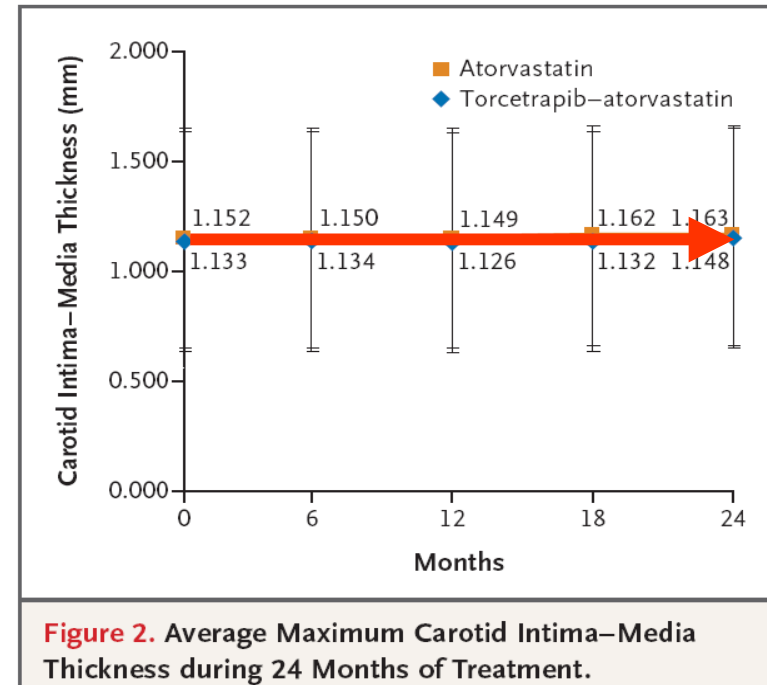
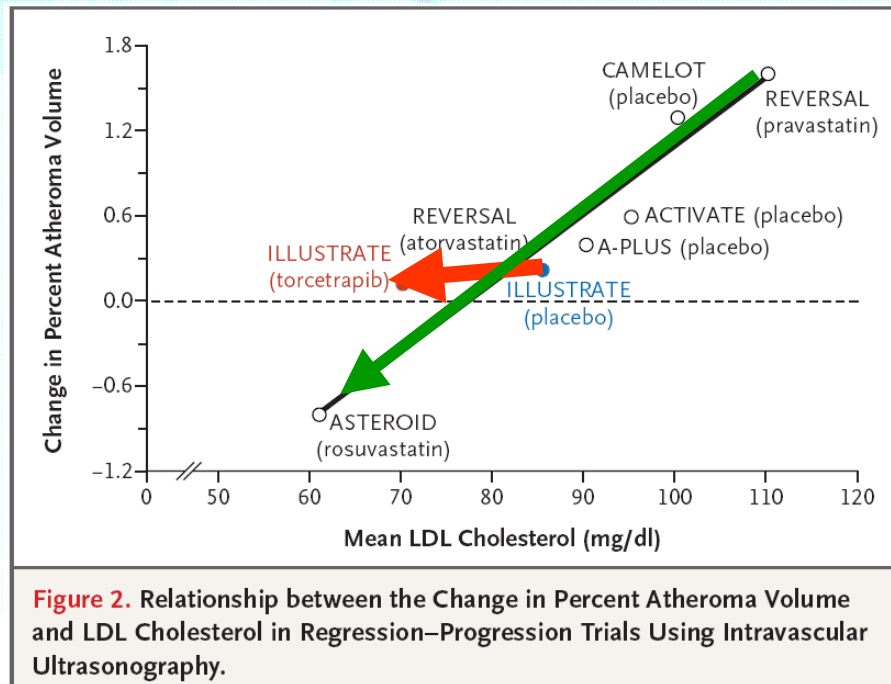


Figure 2. Hazard ratio of the primary end point compared with achieved calculated low-density lipoprotein (LDL) 80 to 100 mg/dl (adjusted for age, gender, baseline calculated low-density lipoprotein, diabetes mellitus, and prior myocardial infarction).



¿todos los descensos del colesterol LDL son igual de beneficiosos?



ILLUSTRATE

N Engl J Med 2007;356:1304-16.

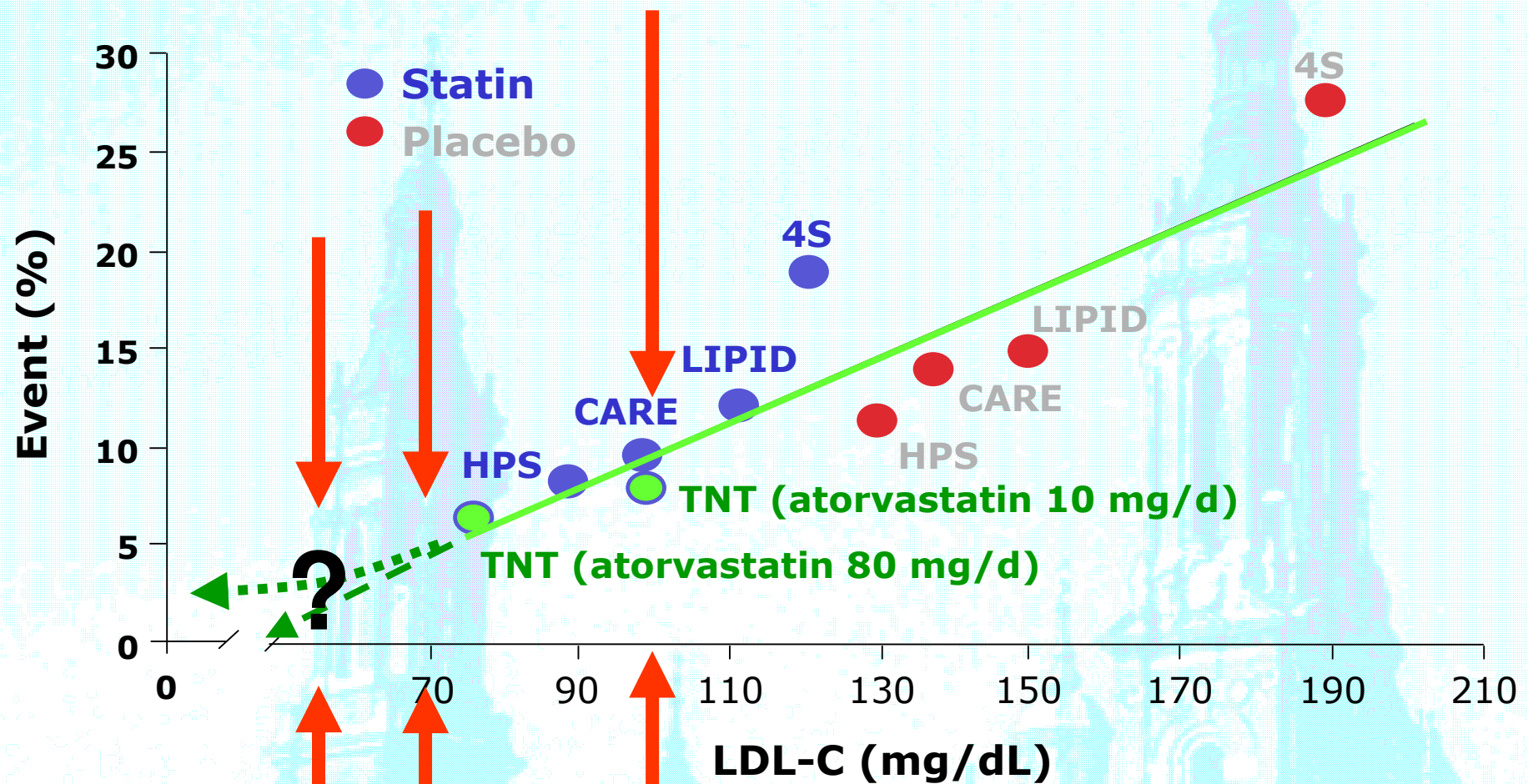
RADIANCE

N Engl J Med 2007;356:1620-1630





Relationship Between LDL-C and Event Rates in TNT and Other Statin Trials





AHA/ACC Guidelines for Secondary Prevention for Patients with Coronary and Other Atherosclerotic Vascular Disease: 2006 Update

Lipid Management Goals: NCEP

Risk Category	LDL-C and non-HDL-C Goal	Initiate TLC	Consider Drug Therapy
High risk: CHD or CHD risk equivalents (10-year risk >20%) and	<100 mg/dL if TG > 200 mg/dL, non-HDL-C should be < 130 mg/dL	≥100 mg/dL	≥100 mg/dL (<100 mg/dL: consider drug options)
Very high risk: ACS or established CHD plus: <u>multiple major risk factors</u> (especially diabetes) or severe and poorly controlled risk factors ¿Multiple vascular beds?	<70 mg/dL, non-HDL-C < 100 mg/dL ¿SUBCLINICAL?	All patients	≥100 mg/dL (<100 mg/dL: consider drug options)

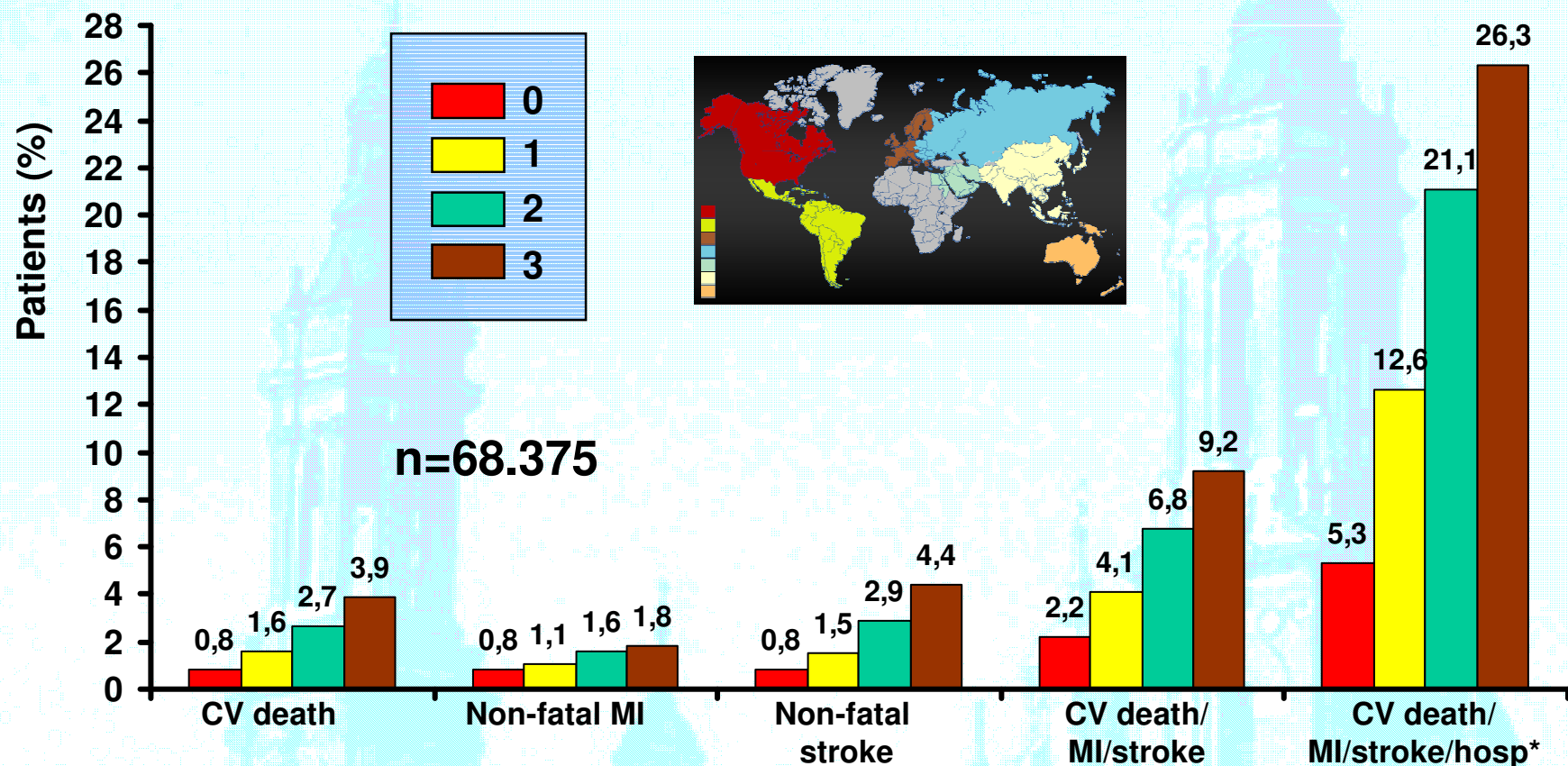
ATP=Adult Treatment Panel, CHD=Coronary heart disease, LDL-C=Low-density lipoprotein cholesterol, TLC=Therapeutic lifestyle changes

Circulation 2006;113:2363-2372 and J Am Coll Cardiol 2006;47:2130-2139



One-year CV event rates as a function of the number of symptomatic disease locations

Patients with >3 risk factors but no symptoms are counted as 0, even in the presence of asymptomatic carotid plaque or reduced ankle brachial index



MI=myocardial infarction; *such as transient ischemic attack, unstable angina, worsening of peripheral arterial disease; adjusted for age and gender

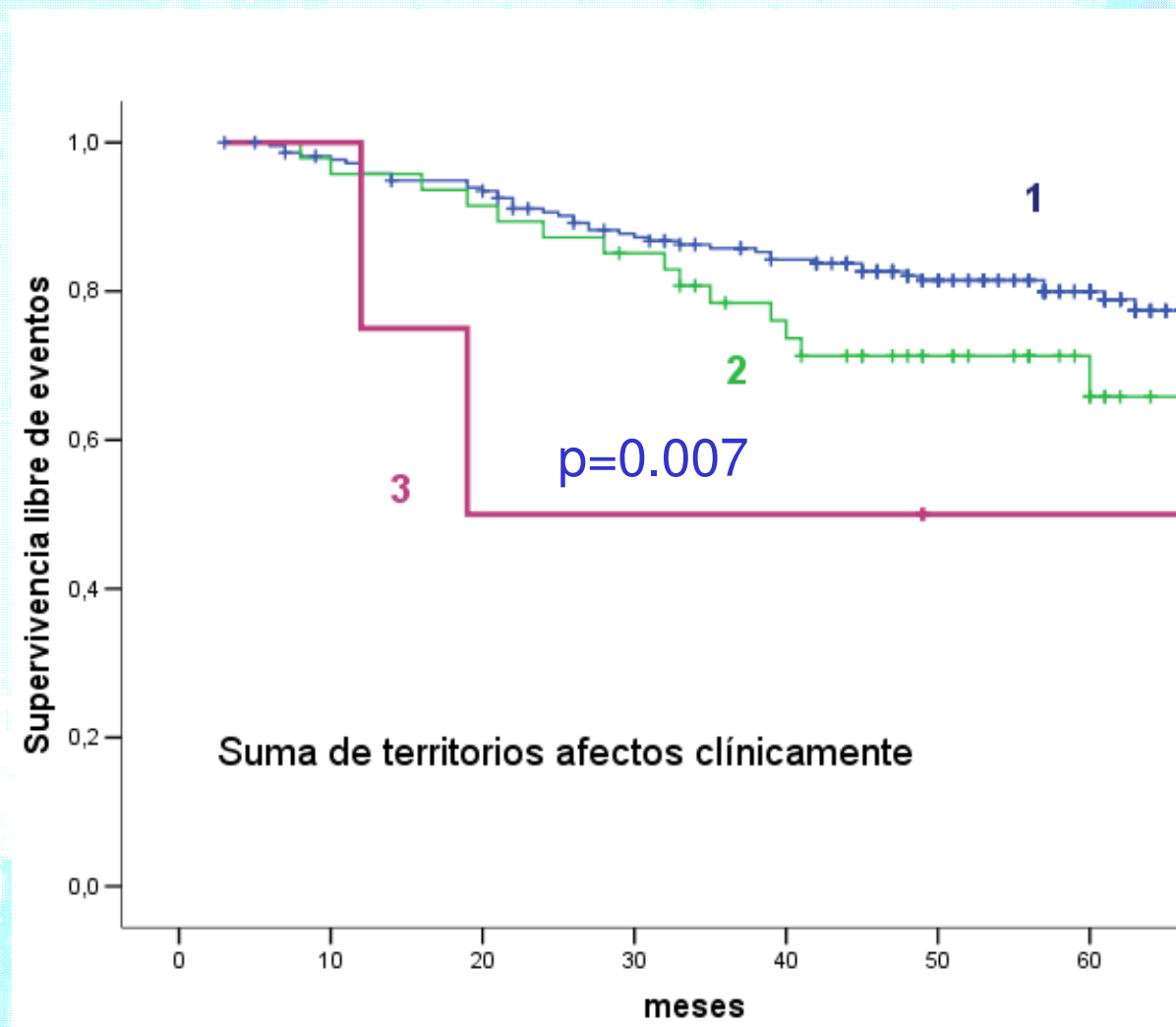


• JAMA 2007;297(11): 1197-1206.



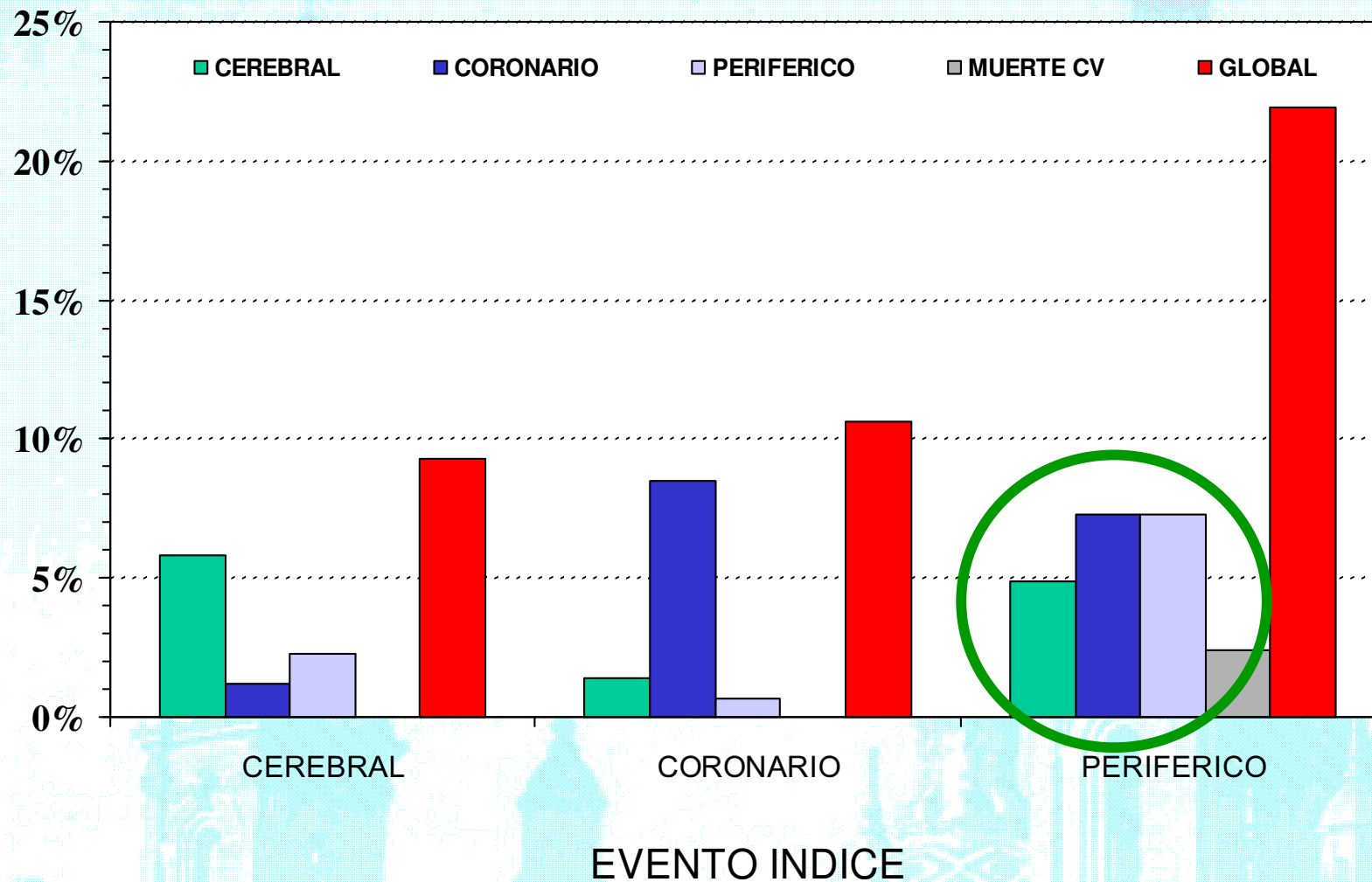


Estudio AIRVAG: nuevos eventos



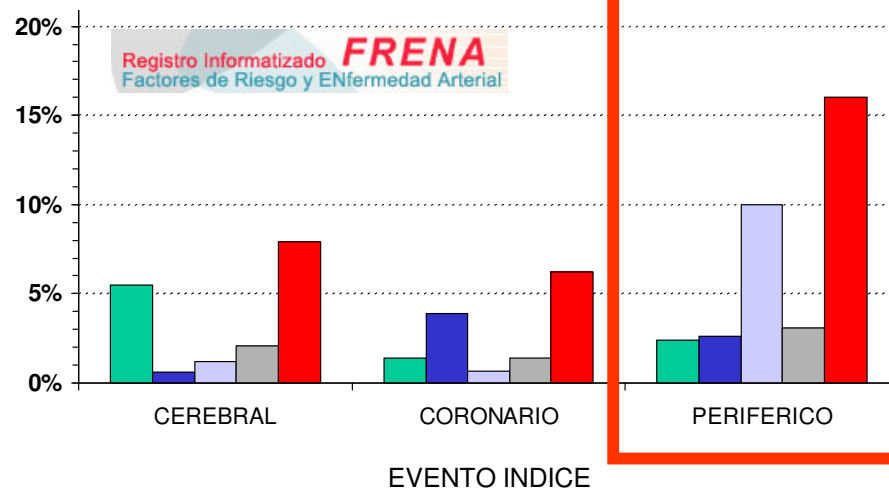
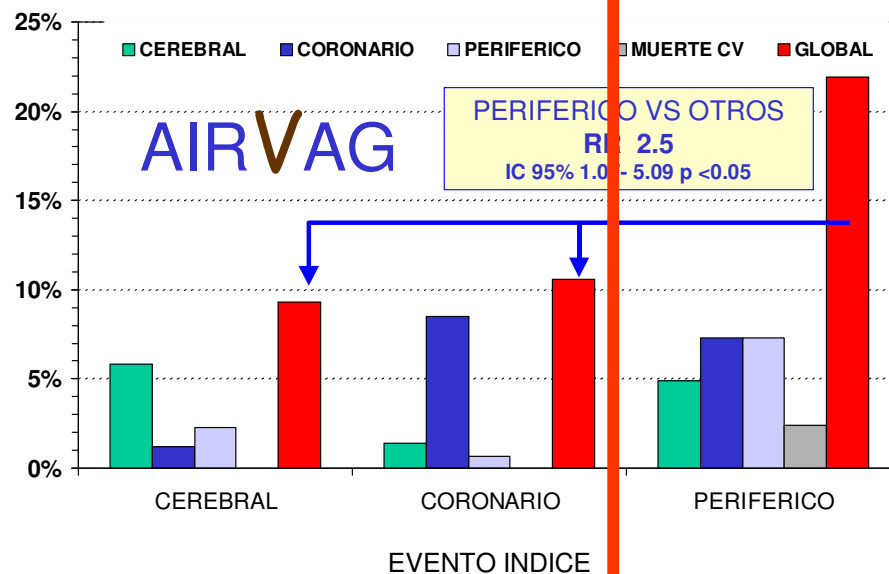


Estudio AIRVAG: nuevos eventos





NUEVOS EVENTOS ISQUÉMICOS



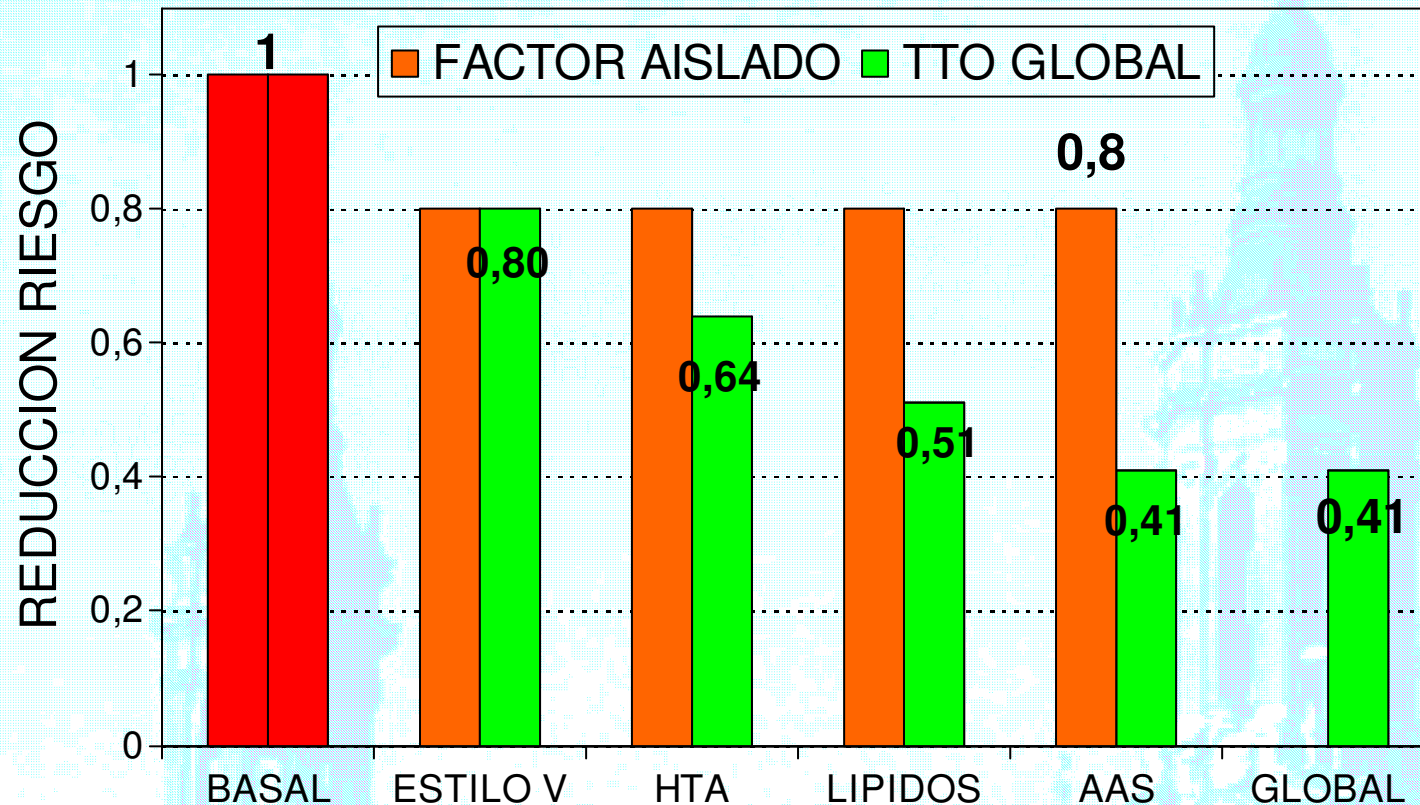


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Tratamiento integral de FR



Si por **cada intervención** tenemos una
reduccion de RR del **20%**
 $(0.8 \times 0.8 \times 0.8 \times 0.8) = 0.4 = \text{RRR } 60\%$



Tratamiento integral de FR

- Modificaciones estilo de vida
Dieta; ejercicio físico, tabaco
- Control de presión arterial
- Control de dislipemia
- Tratamiento antiagregante

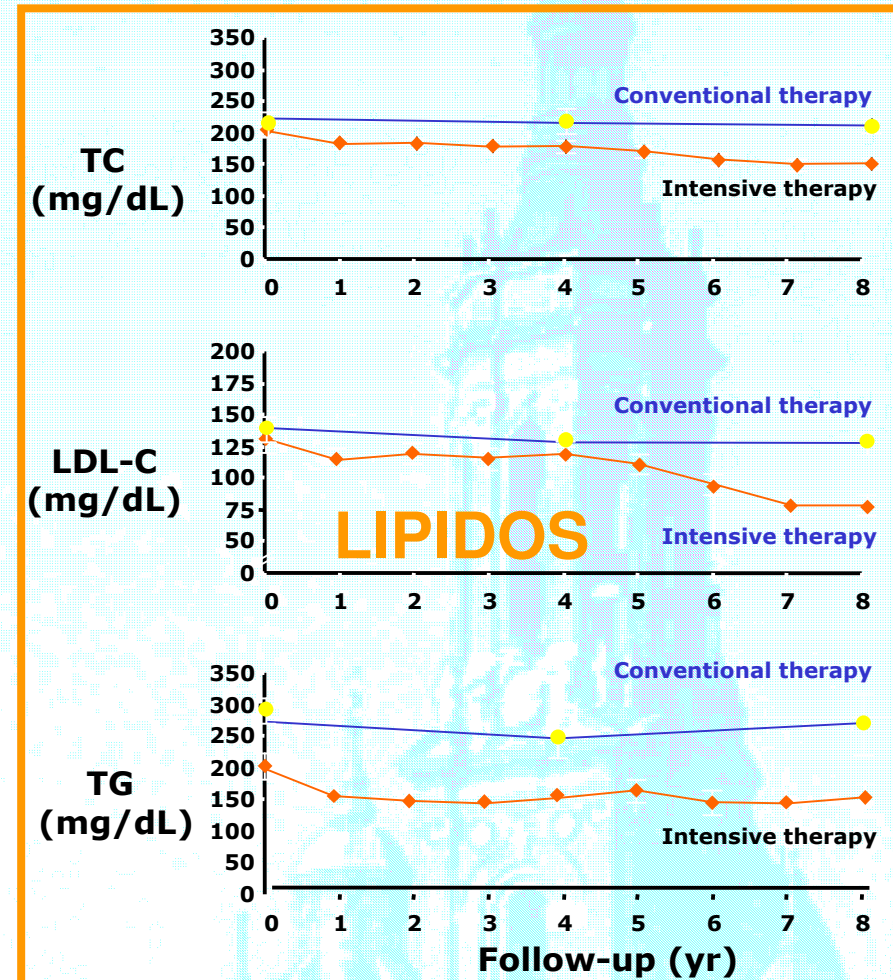
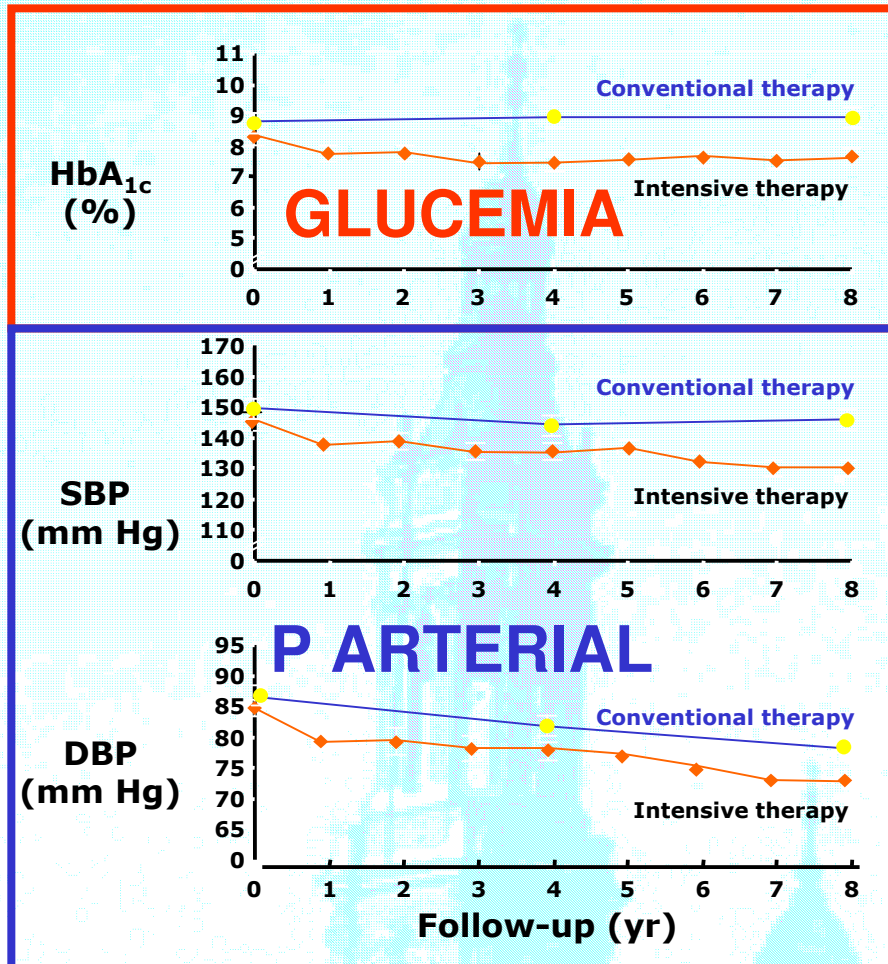
Si por **cada intervención** tenemos una reducción de RR del **20%**

$$(0.8 \times 0.8 \times 0.8 \times 0.8) = 0.4 = \text{RRR } 60\%$$



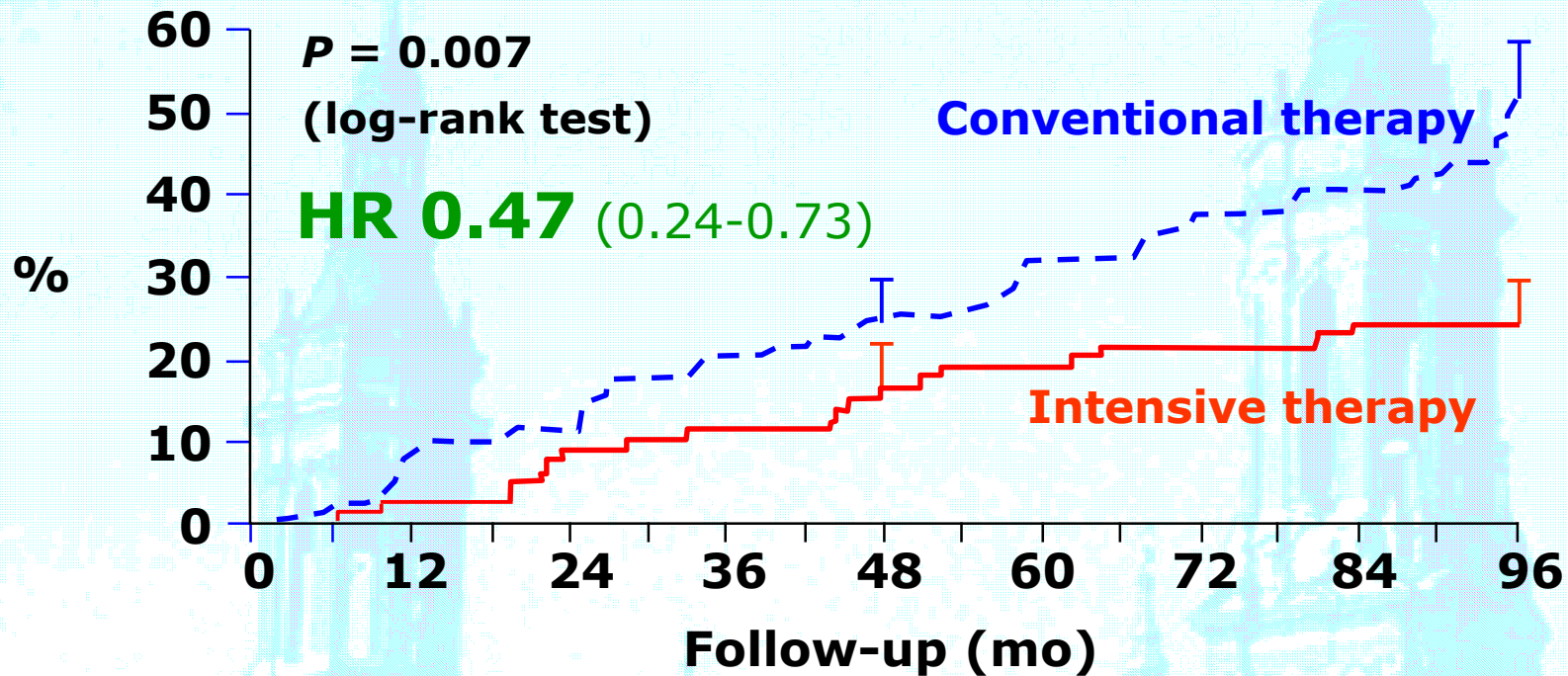
Steno-2: 160 DM2 patients + microalbuminuria

Effect of Therapies on Selected Risk Factors





Steno-2: Primary Composite End Point (CV Events or Surgery for PAD)



No. at Risk

Conventional tx	80	72	70	63	59	50	44	41	13
Intensive tx	80	78	74	71	66	63	61	59	19

Proyecto MIRVAS

Reducción de morbimortalidad cardiovascular mediante un control integral e intensivo de factores de riesgo

M.A. Moreno Palanco

P. Ibáñez Sanz

Pizarro Portillo

L. Pérez Alonso

C. Ciria

C. Sánchez Luis

C. Suárez



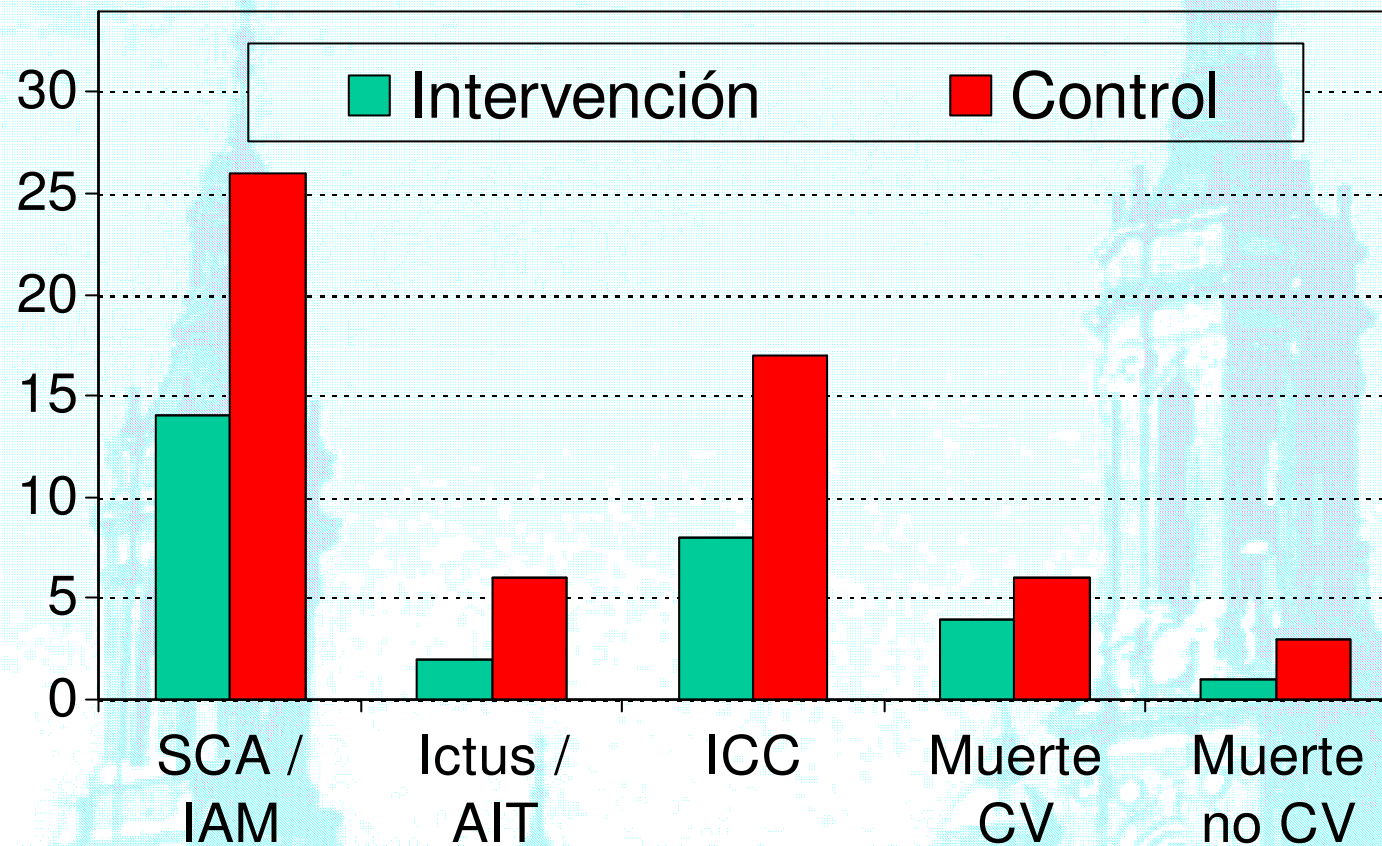


MIRVAS Resultados: control de FRCV

VARIABLE	G. INTERV.		G. CONTROL		Valor p	RR [IC 95%]
	n*	%**	n*	%**		
TABAQUISMO	106	93,4	92	91,3	0,602	0,76 [0,29-2,01]
ALCOHOL	106	92,5	92	87	0,241	0,58 [0,25-1,35]
DIETA	106	92,5	92	73,9	<0,0005	1,25 [1,10-1,43]
EJERCICIO FÍSICO	106	76,4	92	51,1	<0,0005	1,50 [1,19-1,88]
PA OBJETIVO GLOBAL	106	82,1	93	58,1	<0,0005	1,41 [1,16-1,72]
PA OBJETIVO CON AP HTA	58	74,1	60	41,7	<0,0005	1,78 [1,27-2,49]
IMC < 25 kg/m ²	101	17,8	86	24,4	0,284	0,73 [0,42-1,28]
LDL < 100 mg/dl	104	70,2	86	55,8	0,049	1,26 [1,00-1,58]
HbA1c <7%	29	93,1	21	57,1	0,004	1,63 [1,11-2,39]
HbA1c <6%	30	73,3	25	36,0	0,006	2,13 [1,16-3,91]
LDL <70 mg/dl	104	14,4	86	18,6	0,28	0,86 [0,59-1,28]



MIRVAS: Resultados: eventos cardiovasculares



RR 0.28

(IC 0.15-0.51)

RR 0.22

(IC 0.11-0.45)



Objetivo PRINCIPAL: REDUCCION DEL RIESGO VASCULAR

Es posible lograrlo > 50% con abordaje global
Objetivos **más ambiciosos** en pacientes de muy alto riesgo

Objetivos del tratamiento farmacológico

- Hipotensor hasta 130/80mm Hg
 - Incluidos pacientes con TA normal /alta
- Hipolipemiante hasta 70 mg/dl (LDL)
 - Incluidos pacientes con colesterol 'normal'
- Tratamiento antiagregante a todo paciente de alto riesgo, salvo contraindicación

NO SÉ SI CADA VEZ LO VEO TODO MÁS CLARO O SI SÓLO
ESTOY CONFUNDIDO A UN NIVEL SUPERIOR

