LDL: Descenso porcentual o hasta alcanzar objetivo. Un análisis razonado

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REUS

Circulation

JOURNAL OF THE AMERICAN HEART ASSOCIATION

American Heart Association.

2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults: A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines

Neil J. Stone, Jennifer Robinson, Alice H. Lichtenstein, C. Noel Bairey Merz, Conrad B. Blum, Robert H. Eckel, Anne C. Goldberg, David Gordon, Daniel Levy, Donald M. Lloyd-Jones, Patrick McBride, J. Sanford Schwartz, Susan T. Shero, Sidney C. Smith, Jr, Karol Watson and Peter W.F. Wilson

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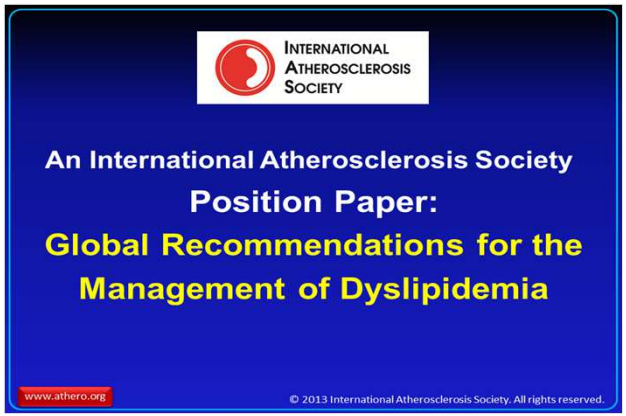

European Heart Journal (2011) **32**, 1769–1818
doi:10.1093/eurheartj/ehr158

ESC/EAS GUIDELINES

ESC/EAS Guidelines for the management of dyslipidaemias

The Task Force for the management of dyslipidaemias of the European Society of Cardiology (ESC) and the European Atherosclerosis Society (EAS)

European Heart Journal
doi:10.1093/eurheartj/ehs092

JOINT ESC GUIDELINES

European Guidelines on cardiovascular disease prevention in clinical practice (version 2012)

The Fifth Joint Task Force of the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice (constituted by representatives of nine societies and by invited experts)

LDL–C levels and percent reduction are to be used only to assess response to therapy and adherence. They are not to be used as performance standards.

Tabla 10 (page 46)

LDL

ESTATINAS

European Heart Journal Advance Access published May 3, 2012

European Heart Journal
doi:10.1093/eurheartj/ehs092

JOINT ESC GUIDELINES

European Guidelines on cardiovascular disease prevention in clinical practice (version 2012)

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Evaluación del riesgo cardiovascular global

PACIENTES CON RIESGO CARDIOVASCULAR MUY ALTO

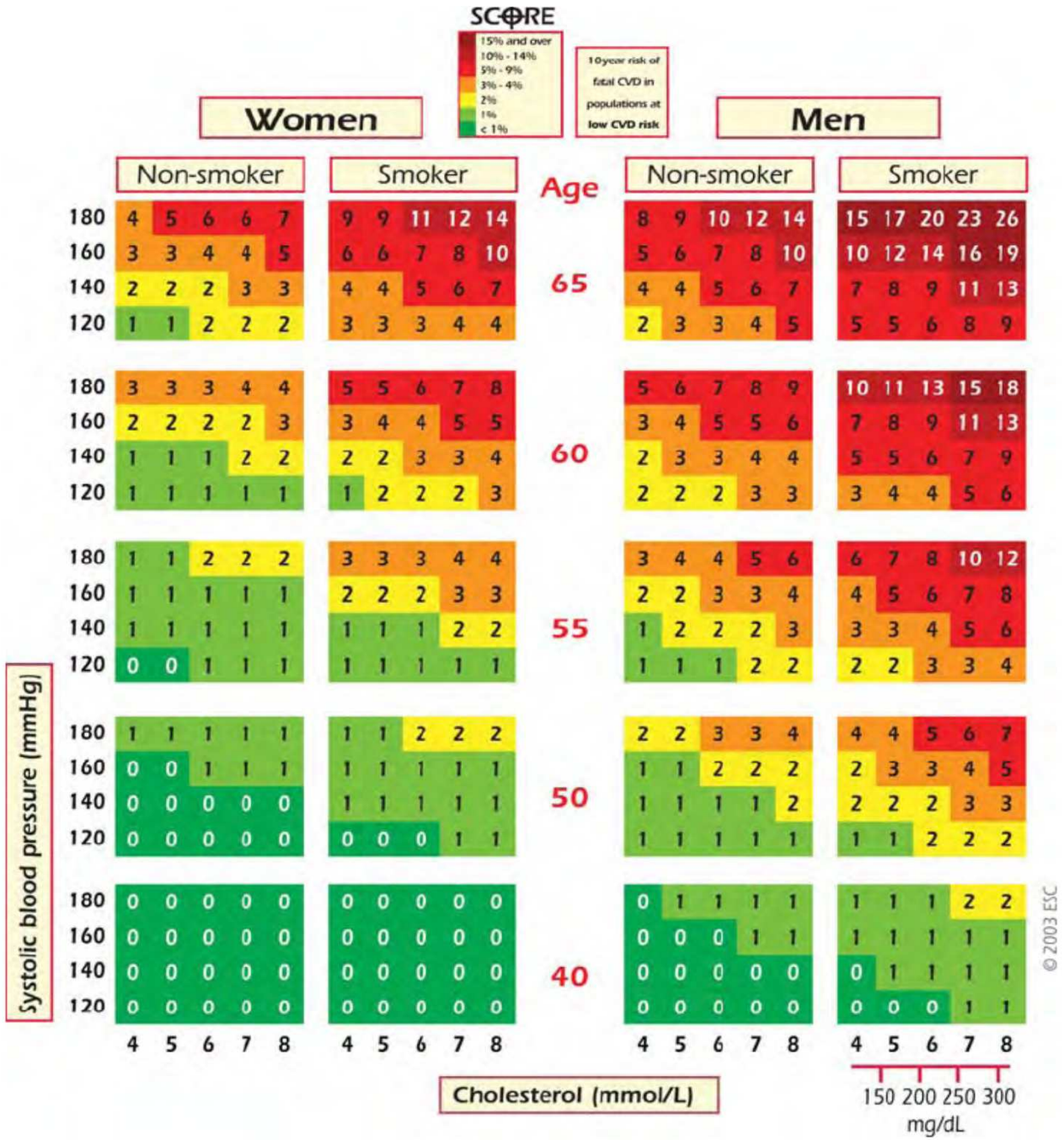
- Enfermedad cardiovascular conocida (clínica o subclínica)
- Diabetes tipo 2 (con un factor de riesgo o LOD/microalbuminuria)
- Diabetes tipo 1 (con un factor de riesgo o LOD/microalbuminuria)
- Riesgo cardiovascular global >10 (SCORE)
- Enfermedad renal crónica (MDRD <30 ml/min/1.73m^2)

LDL < 70 mg/dl

PACIENTES CON RIESGO CARDIOVASCULAR ALTO

- Un factor de riesgo muy alterado (HF y otras)
- Diabetes tipo 2 sin factores de riesgo ni LOD)
- Diabetes tipo 1 sin factores de riesgo ni LOD
- Riesgo cardiovascular global >5 <10 (SCORE)
- Enfermedad renal crónica (MDRD < 60 >30 ml/min)

LDL < 100 mg/dl


SCORE
15% and over
10% - 14%
5% - 9%
3% - 4%
2%
1%
< 1%
10-year risk of fatal CVD in populations at low CVD risk
Women
Men
Non-smoker
Smoker
Non-smoker
Smoker
Age
65
60
55
50
40
Systolic blood pressure (mmHg)
180 160 140 120
4 5 6 7 8
Cholesterol (mmol/L)
150 200 250 300
mg/dL
© 2003 ESC

LDL

Se identifican 4 grupos de pacientes en los que los beneficios del tratamiento con estatinas en cuanto a la reducción del riesgo de padecer enfermedades cardiovasculares ateromatosas (ECVA) es superior al riesgo de efectos adversos

1. **Clínica de ECVA** (SCA, IM, angor, revascularización, ictus, AVT, EVP)
2. **Elevaciones primarias cLDL >190 mg/dL**
3. **Diabetes en pacientes de 40 a 75 años con cLDL entre 70 y 189 mg/dL y sin ECVA**
4. **Individuos sin ECVA ni diabetes con cLDL entre 70 y 189 mg/dL y un riesgo global estimado de padecer ECVA a los 10 años >7.5%**

Se definen tres niveles de intensidad en el tratamiento con estatinas

High-Intensity Statin Therapy	Moderate-Intensity Statin Therapy	Low-Intensity Statin Therapy
Daily dose lowers LDL–C on average, by approximately ≥50%	Daily dose lowers LDL–C on average, by approximately 30% to <50%	Daily dose lowers LDL–C on average, by <30%
Atorvastatin (40†)–80 mg **Rosuvastatin 20** *(40)* **mg**	**Atorvastatin 10** *(20)* **mg** **Rosuvastatin** (*5*) **10 mg** **Simvastatin 20–40 mg‡** **Pravastatin 40** *(80)* **mg** **Lovastatin 40 mg** *Fluvastatin XL 80 mg* **Fluvastatin 40 mg bid** *Pitavastatin 2–4 mg*	*Simvastatin 10 mg* **Pravastatin 10–20 mg** **Lovastatin 20 mg** *Fluvastatin 20–40 mg* *Pitavastatin 1 mg*

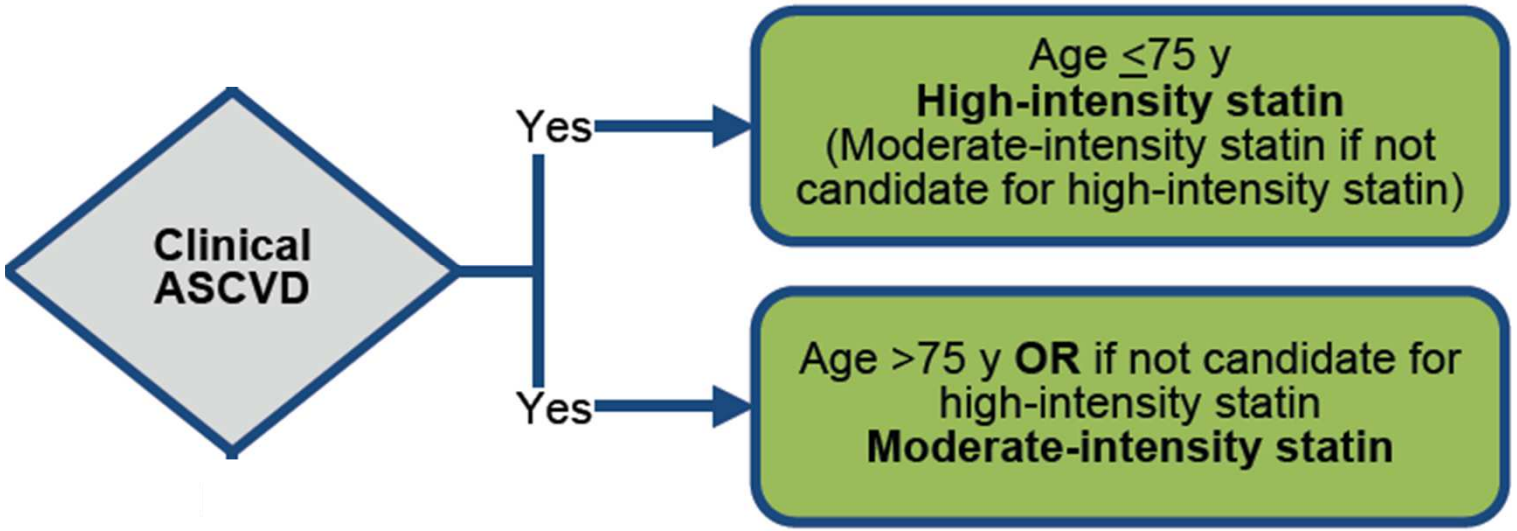
No se establecen recomendaciones a favor o en contra de objetivos de cLDL o cNO-HDL ni en prevención primaria ni secundaria

Las guías no establecen objetivos terapéuticos ni para LDL ni para cNO-HDL

Se cuestionan dos estrategias ampliamente implementadas en la práctica clínica al considerar que los estudios randomizados y controlados no se diseñaron para alcanzar distintos objetivos terapéuticos sino que, prácticamente todos, se realizaron con dosis fijas de estatinas:

ESTATINAS

En todos los pacientes de menos de 75 años con clínica de ECVA (SCA, IM, angor, revascularización, ictus, AVT, EVP), independientemente de sus cifras de cLDL, iniciar tratamiento de alta intensidad con estatinas



Hombre de 56 años
Infarto de miocardio
Tratado con estatina alta intensidad

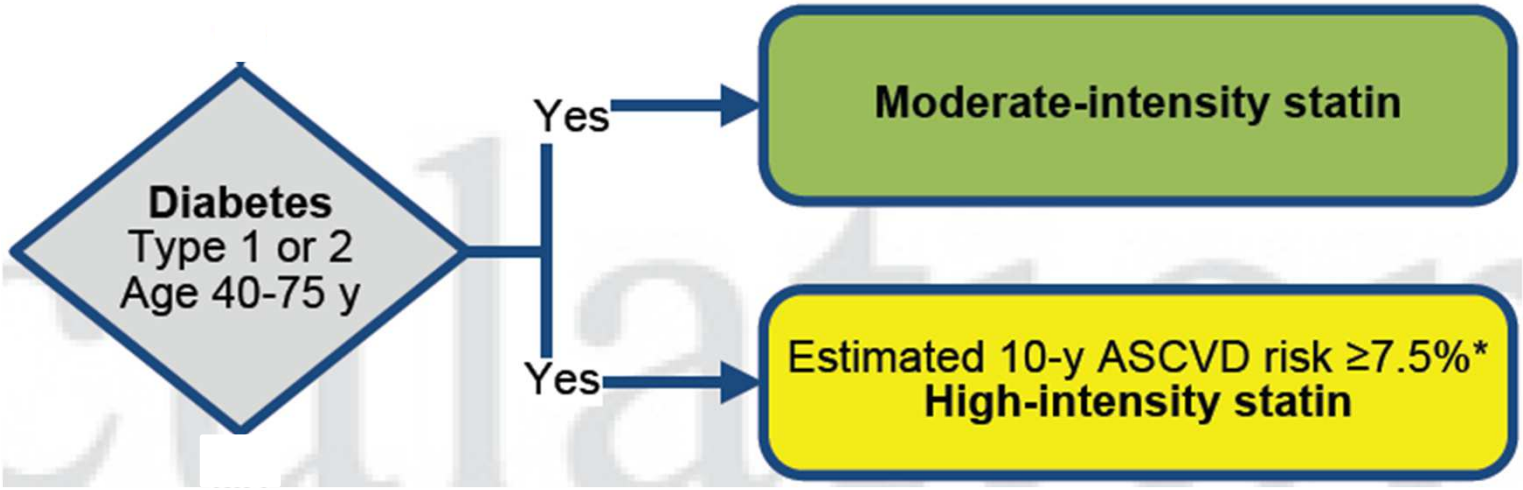
TC: 221; HDL: 30; LDL: 134; TG: 288 (mg/dl)

Debemos aumentar el tratameinto hasta obtener el objetivo 70

El paciente está recibiendo el tratamiento basado en el máximo grado de evidencia

En pacientes de 40 a 75 años con diabetes tipo 1 o 2, con cLDL entre 70 y 189 mg/dL y sin ECVA iniciar tratamiento con estatinas de moderada intensidad.

Si su riesgo global es alto (≥7.5%) utilizar estatinas de alta intensidad



Mujer de 62 años

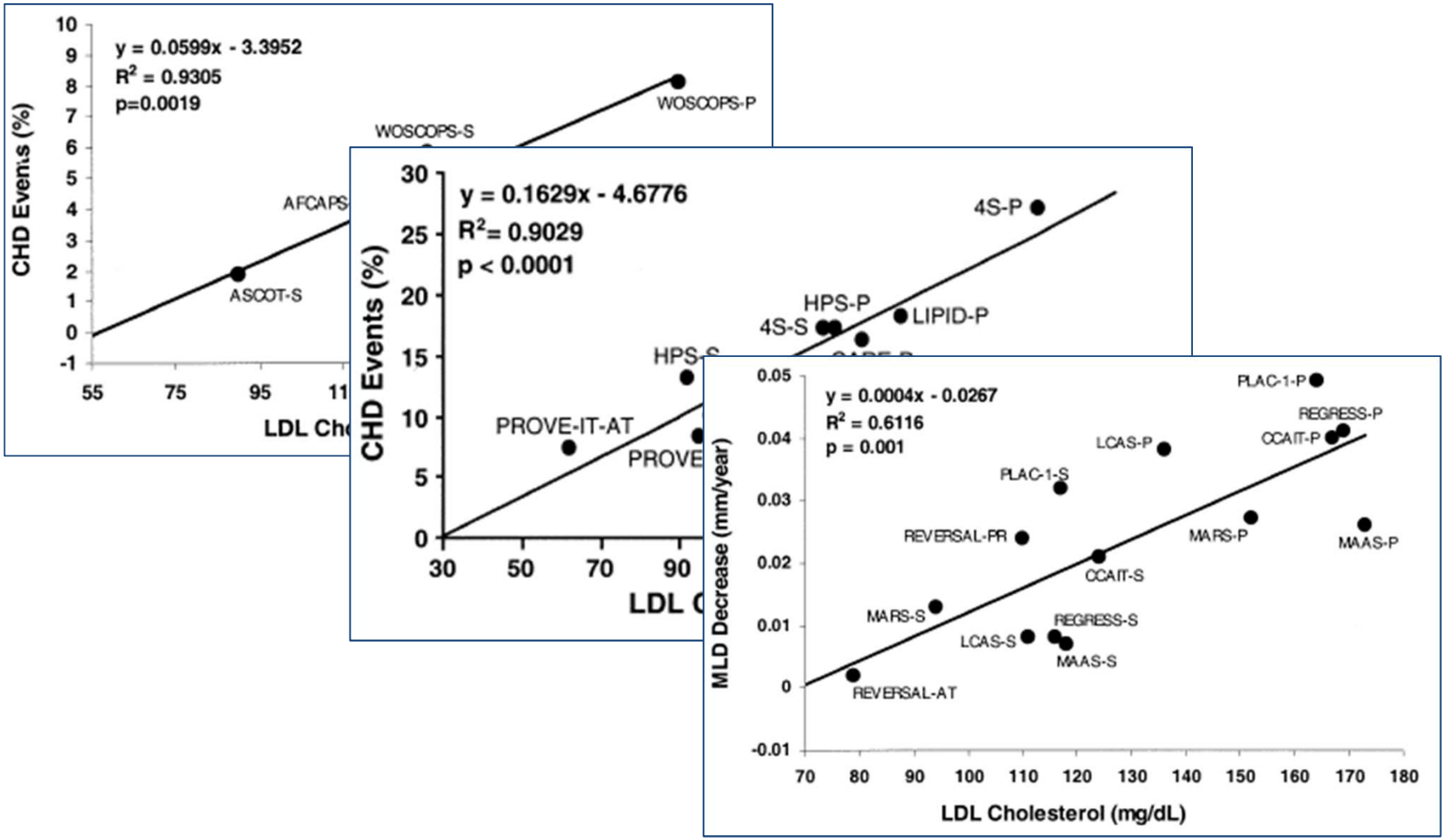
Diabética + HTA *(RCV global ACC/AHA 6.9)*

TC: 260; HDL: 50; LDL: 170; TG: 200 (mg/dl)

Tratamiento con estatina potente y si es necesario combinaciones hasta obtener el objetivo 70

Se recomienda tratamiento con estatina de moderada intensidad

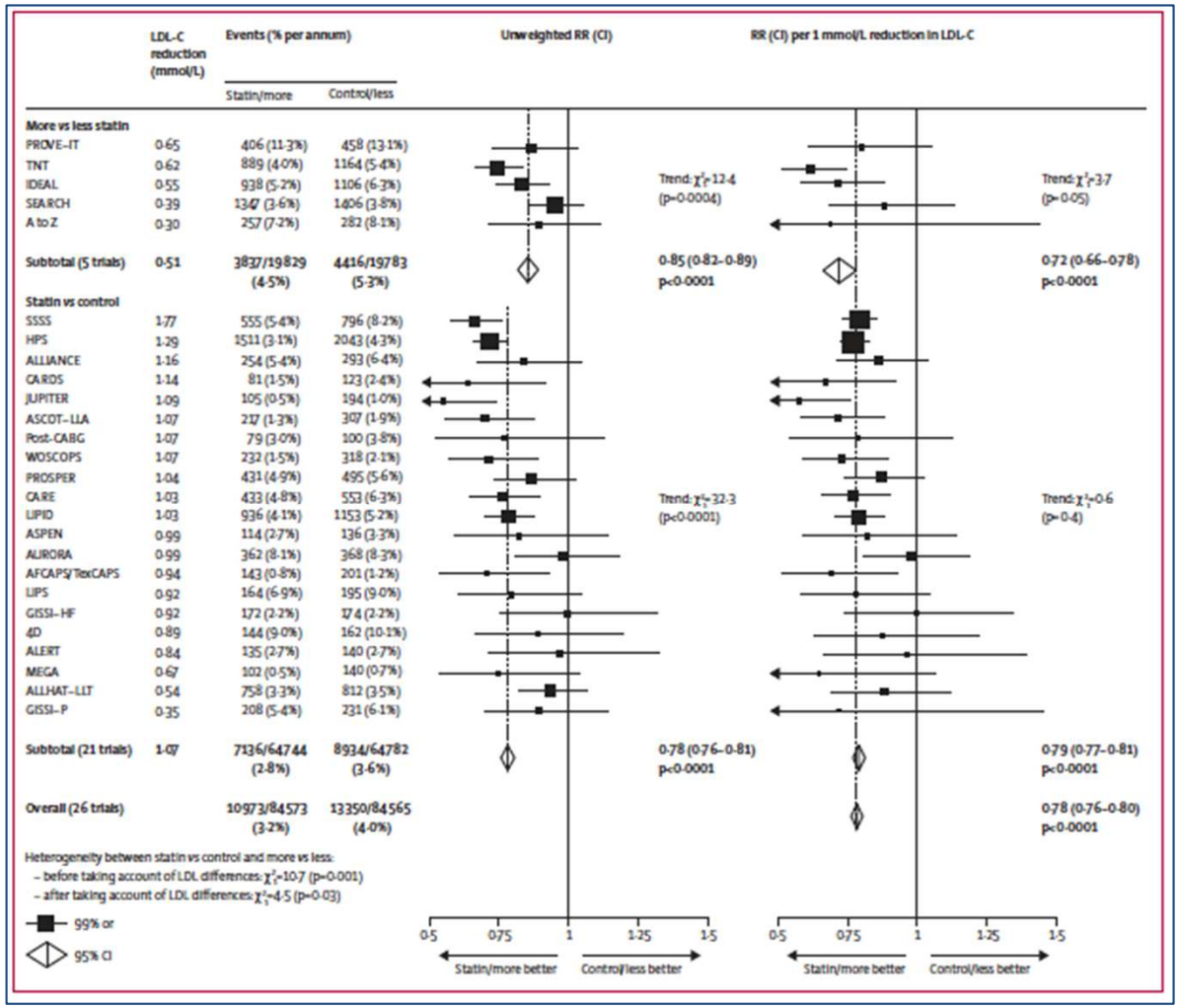
Optimal Low-Density Lipoprotein Is 50 to 70 mg/dl



O'Keefe JH et al J Am Coll Cardiol 2004;43:2142–6)

Efficacy and safety of more intensive lowering of LDL cholesterol: a meta-analysis of data from 170 000 participants in 26 randomised trials

Cholesterol Treatment Trialists' (CTT) Collaboration*



Lancet 2010; 376: 1670–81

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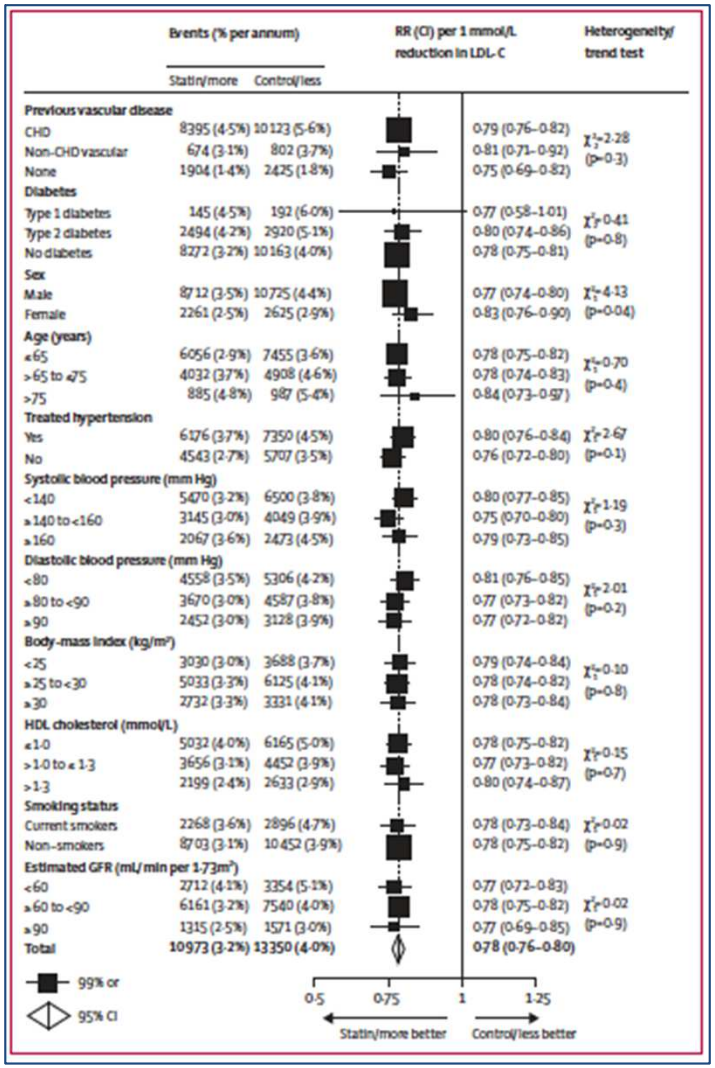
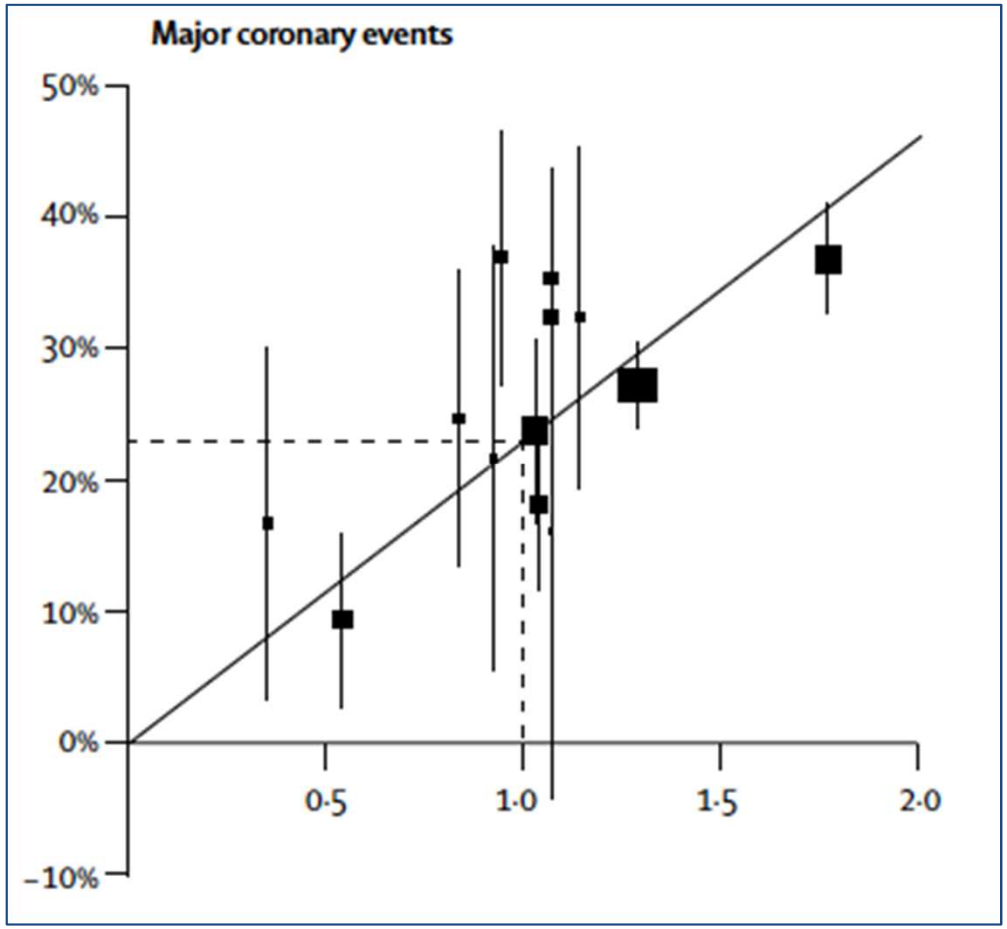


Lancet 2010; 376: 1670–81

Efficacy and safety of cholesterol-lowering treatment: prospective meta-analysis of data from 90 056 participants in 14 randomised trials of statins

Cholesterol Treatment Trialists' (CTT) Collaboration*



Lancet 2005; 366: 1267–78

Efficacy and safety of more intensive lowering of LDL cholesterol: a meta-analysis of data from 170 000 participants in 26 randomised trials

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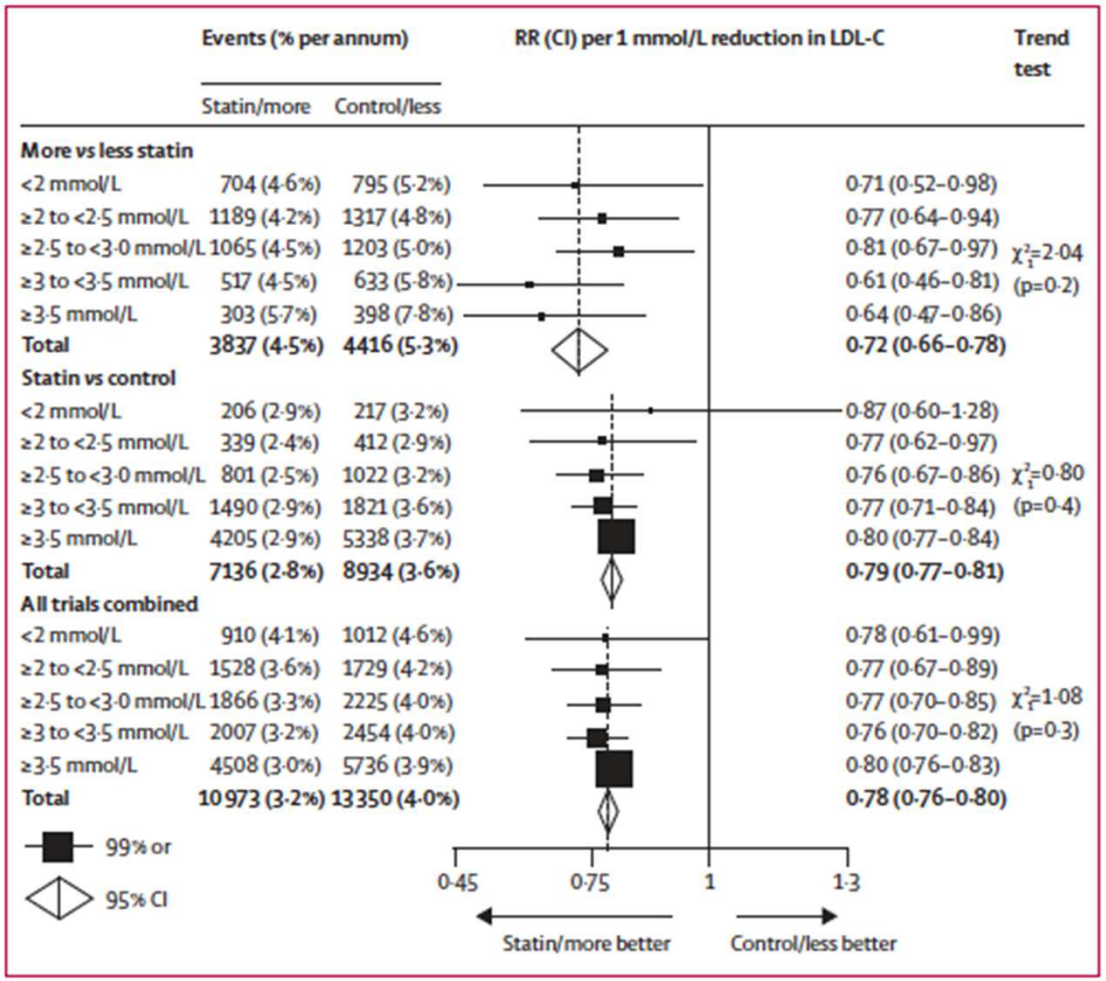
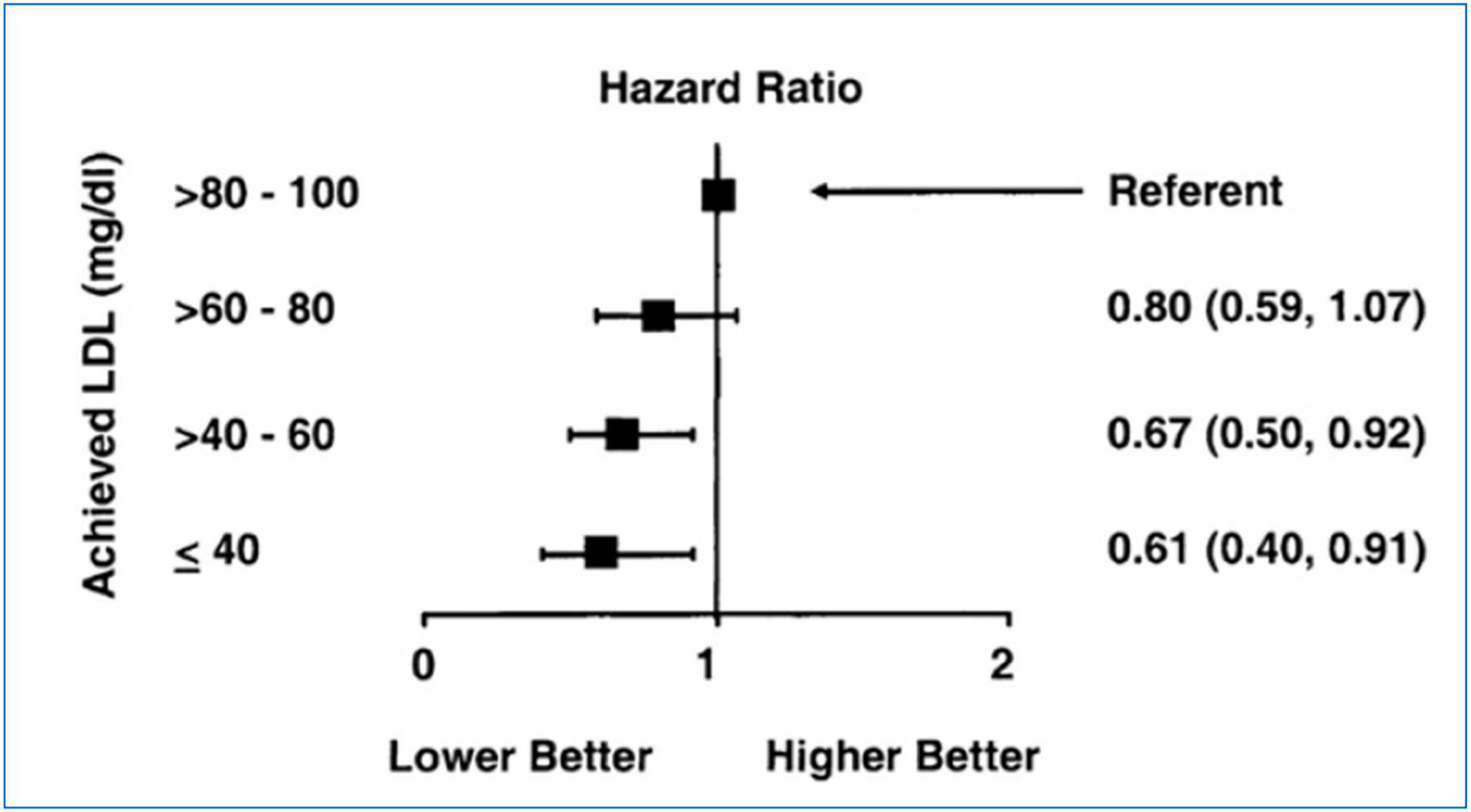


Lancet 2010; 376: 1670–81

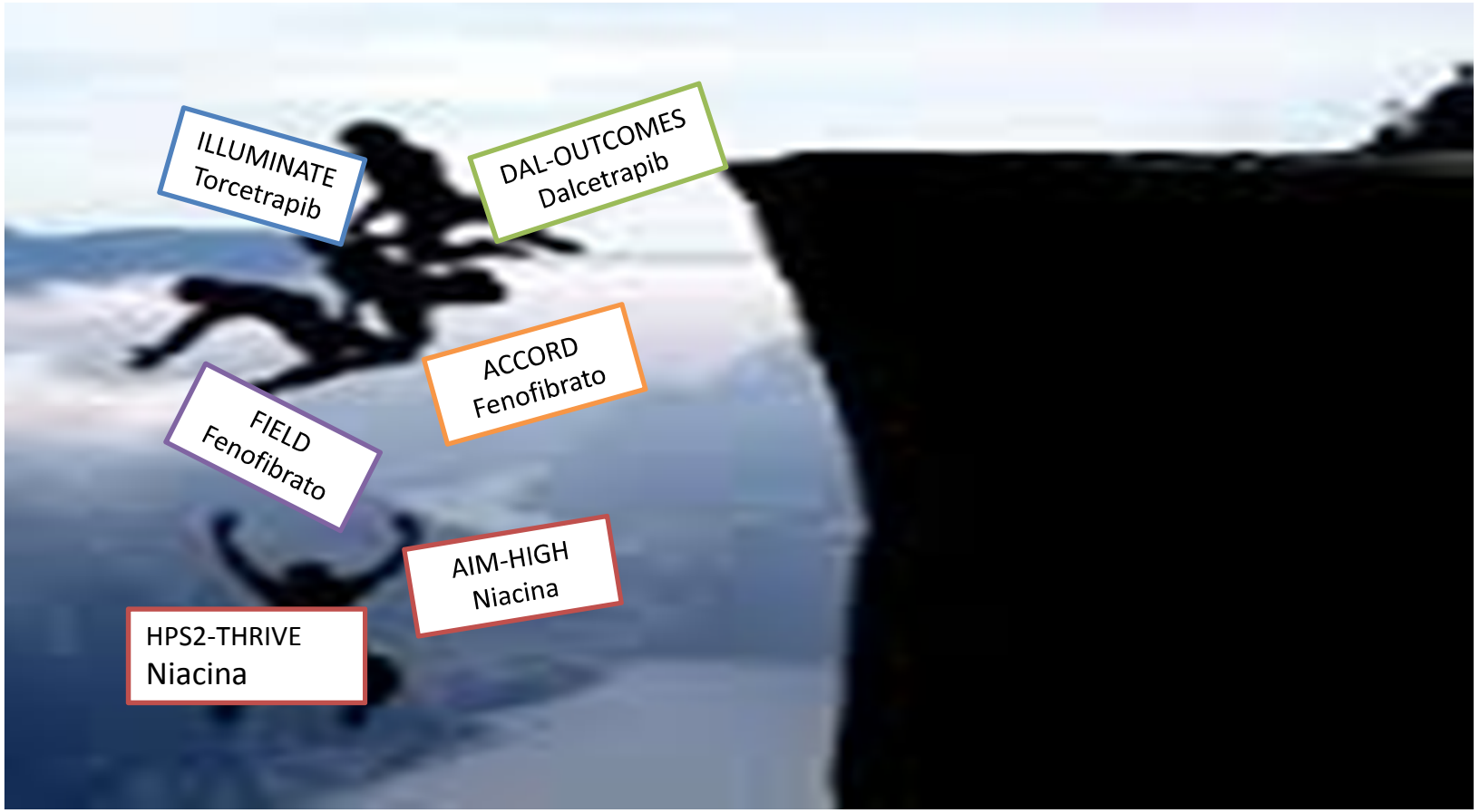
The safety and efficacy of achieving very low low-density lipoprotein with intensive statin therapy: a PROVE IT-TIMI 22 substudy.



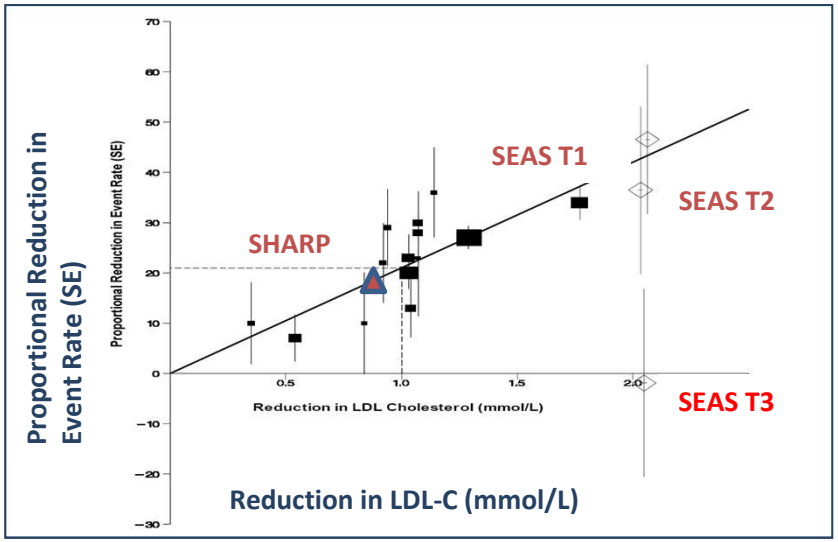
Wiviott SD et al J Am Coll Cardiol 2005;46:1414

Las estatinas son los únicos fármacos que han mostrado eficacia en la reducción de eventos cardiovasculares.

El resto de fármacos o sustancias que reducen el colesterol han fracasado en su intento de mostrar eficacia adicional al uso de estatinas para reducir el riesgo cardiovascular , o bien, no tienen estudios que los refrenden



ICE Reduction by LDL-C Lowering: SHARP and SEAS vs CTT



1mmol/L descenso de LDL con estatina

Descenso de 20% del RR

1 mmol/L descenso de LDL con Simva + Eze

Holme I et al. Am J Cardiol 2010;105:1802–1808

ASBMB JOURNAL OF LIPID RESEARCH

thematic review

Thematic Review Series: Living History of Lipids

In celebration of the 100th anniversary of the lipid hypothesis of atherosclerosis

Daniel Steinberg[1]

University of California San Diego, La Jolla, CA 92093

Abstract This year marks the 100th anniversary of the publication of Anitschkow's classic paper proposing the central role of hypercholesterolemia in atherogenesis. We at the *Journal of Lipid Research* take this occasion to acknowledge the debt we all owe to Anitschkow and his colleagues for getting us on the right track. As discussed below in detail, his contributions were insightful and went well beyond simply pinpointing hypercholesterolemia as a major etiologic factor. Anitschkow's work led him to define most of the key elements in the initiation and evolution of lesions in animal models of atherogenesis.—Steinberg, D. In celebration of the 100th anniversary of the lipid hypothesis of atherosclerosis. *J. Lipid Res.* 2013. 54: 2946–2949.

It is difficult to believe that the key role of cholesterol in the pathogenesis of atherosclerosis was proposed 100 years ago! Yes, in 1913, Nikolai N. Anitschkow, a young Russian experimental pathologist in Saint Petersburg,

inevitable accompanin
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of the leading hypothe
by Metchnikow, was th
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the St. Petersburg Im
including Anitschkow,
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whether any particular
a process of progress
whole eggs or egg yolk
whites alone, even in la
Anitschkow and Chala
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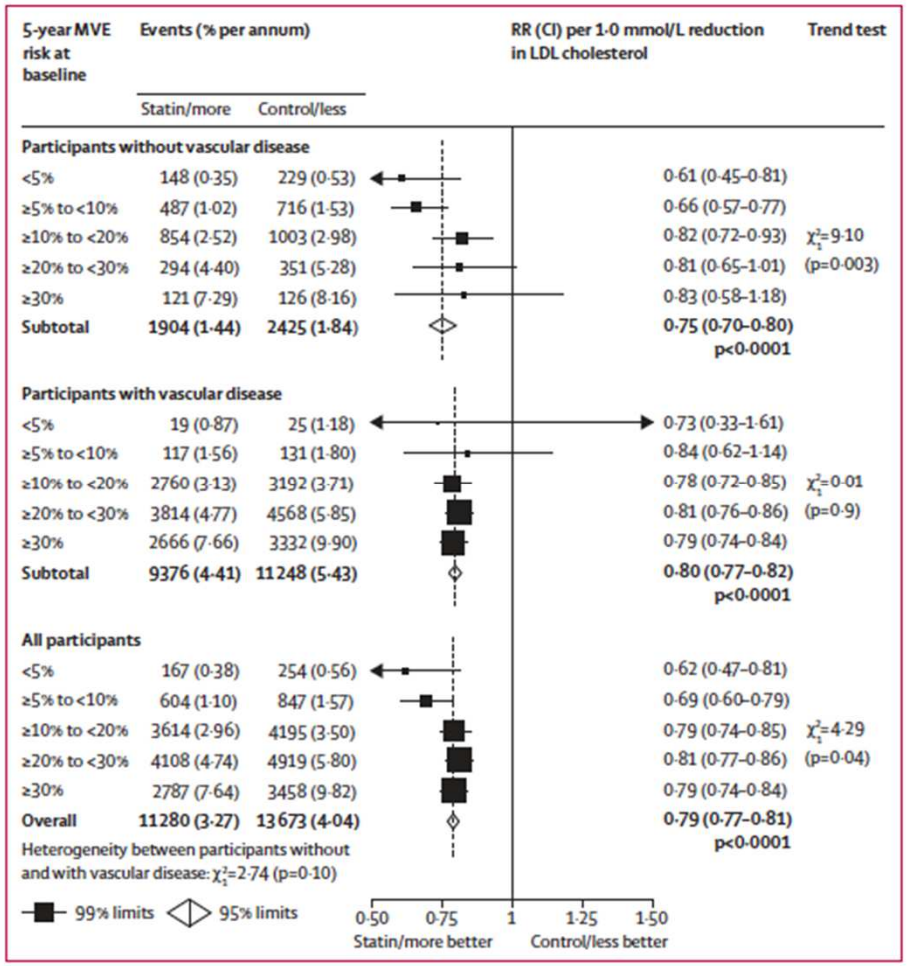

Lancet 2010; 376: 1670–81

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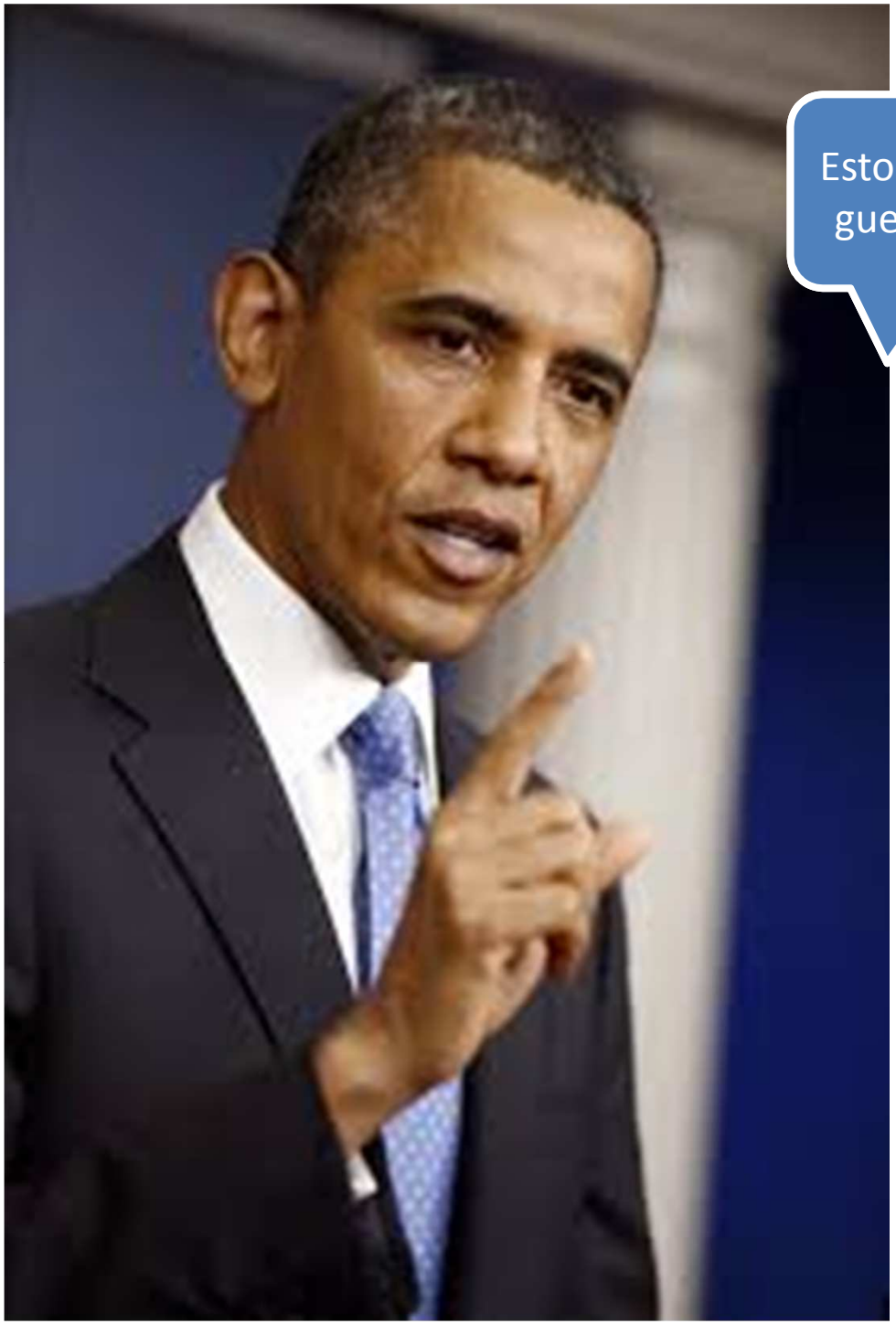
Table 1 Outcomes in statin-naïve patients with LDL-C 2.00 mmol/L

Dose of atorvastatin, mg/day	% decrease in LDL-C	LDL-C achieved, mmol/L	Absolute decrease in LDL-C, mmol/L	Predicted decrease in events, %
10	42	1.16	0.84	16.8
20	45	1.10	0.90	18.0
40	47	1.06	0.94	18.8
80	50	1.00	1.00	20.0

LDL-C, low-density lipoprotein.

Lancet 2010; 376: 1670–81



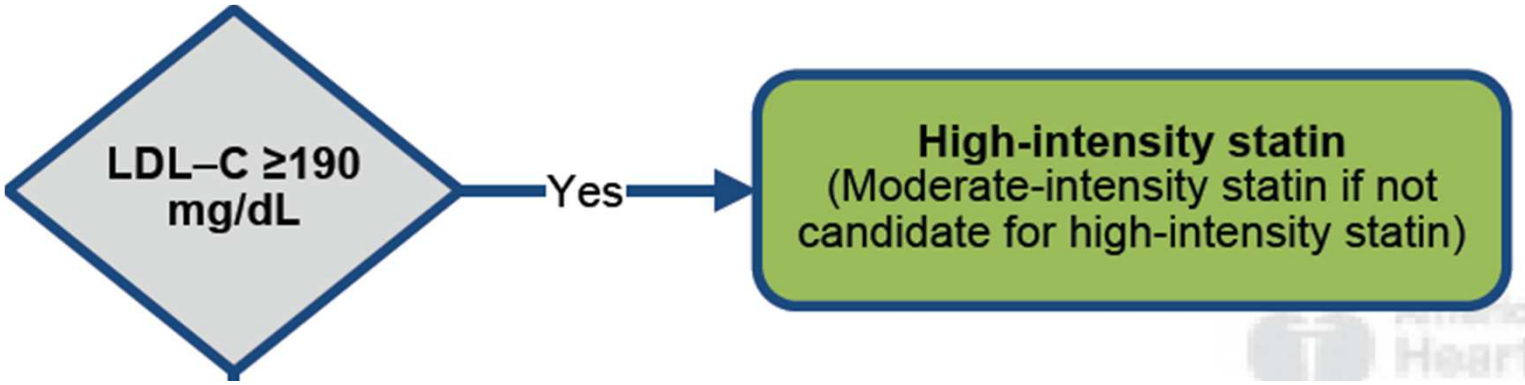
Esto es la tercera guerra mundial

Table 3 Intervention strategies as a function of total CV risk and LDL-C level

Total CV risk (SCORE) %	LDL-C levels				
	<70 mg/dL <1.8 mmol/L	70 to <100 mg/dL 1.8 to <2.5 mmol/L	100 to <155 mg/dL 2.5 to <4.0 mmol/L	155 to <190 mg/dL 4.0 to <4.9 mmol/L	>190 mg/dL >4.9 mmol/L
<1	No lipid intervention	No lipid intervention	Lifestyle intervention	Lifestyle intervention	Lifestyle intervention, consider drug if uncontrolled
Class[a]/Level[b]	I/C	I/C	I/C	I/C	IIa/A
≥1 to <5	Lifestyle intervention	Lifestyle intervention	Lifestyle intervention, consider drug if uncontrolled	Lifestyle intervention, consider drug if uncontrolled	Lifestyle intervention, consider drug if uncontrolled
Class[a]/Level[b]	I/C	I/C	IIa/A	IIa/A	I/A
>5 to <10, or high risk	Lifestyle intervention, consider drug*	Lifestyle intervention, consider drug*	Lifestyle intervention and immediate drug intervention	Lifestyle intervention and immediate drug intervention	Lifestyle intervention and immediate drug intervention
Class[a]/Level[b]	IIa/A	IIa/A	IIa/A	I/A	I/A
≥10 or very high risk	Lifestyle intervention, consider drug*	Lifestyle intervention and immediate drug intervention	Lifestyle intervention and immediate drug intervention	Lifestyle intervention and immediate drug intervention	Lifestyle intervention and immediate drug intervention
Class[a]/Level[b]	IIa/A	IIa/A	I/A	I/A	I/A

*In patients with MI, statin therapy should be considered irrespective of LDL-C levels.[13,14]
[a]Class of recommendation
[b]Level of evidence. References to level A: 15–41.
CV = cardiovascular; LDL-C = low-density lipoprotein-cholesterol; MI = myocardial infarction.

En pacientes con hipercolesterolemias primarias con cifras de cLDL ≥ 190 mg/dl iniciar tratamiento con estatinas de alta intensidad



Mujer de 43 años
Hipercolesterolemia familiar heterozigota
CT: 340; HDL: 44; LDL: 260; TG: 180 (mg/dl)

Estatina alta intensidad
CT: 206 HDL: 40; LDL: 130; TG:180 (mg/dl)

Debemos aumentar el tratamiento hasta obtener el objetivo 100

La paciente ha reducido su LDL un 50% . No medidas adicionales

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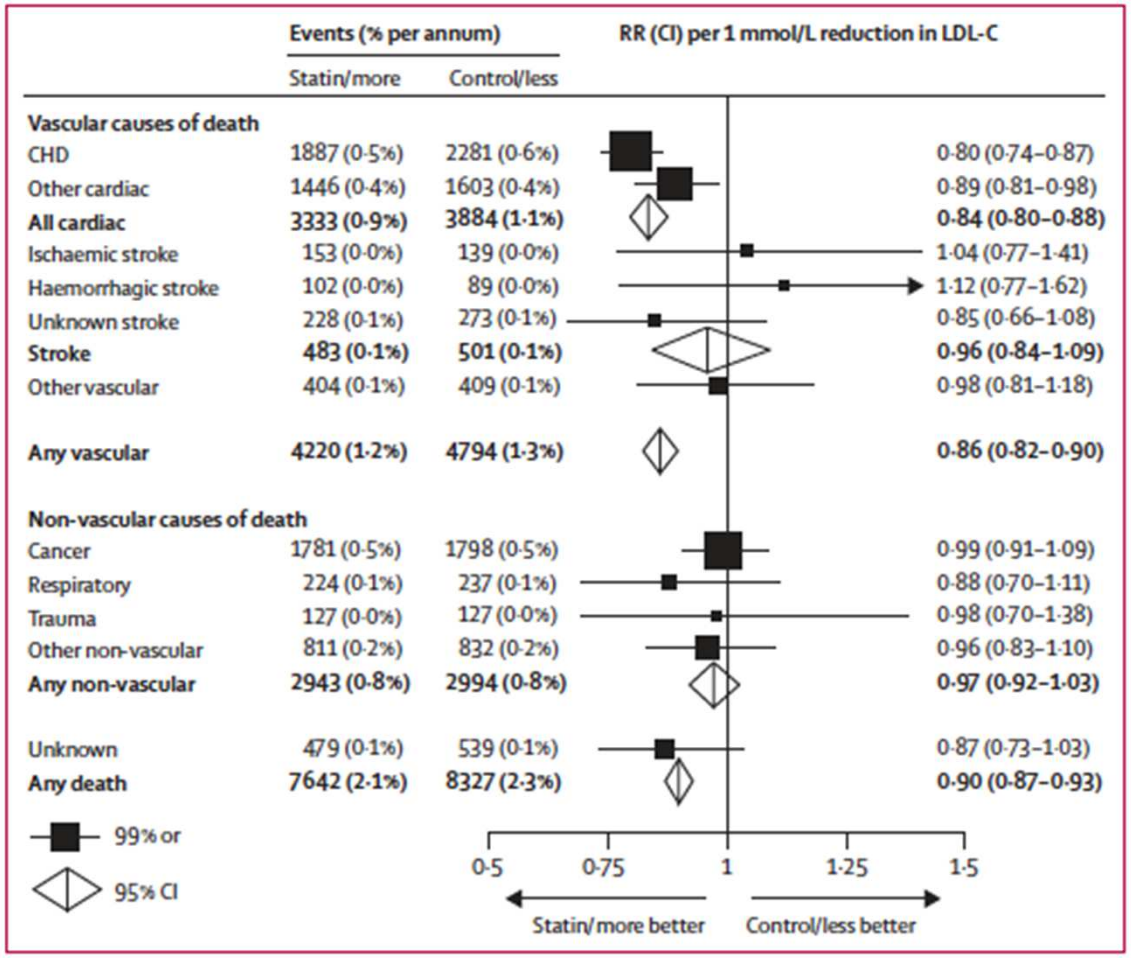

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