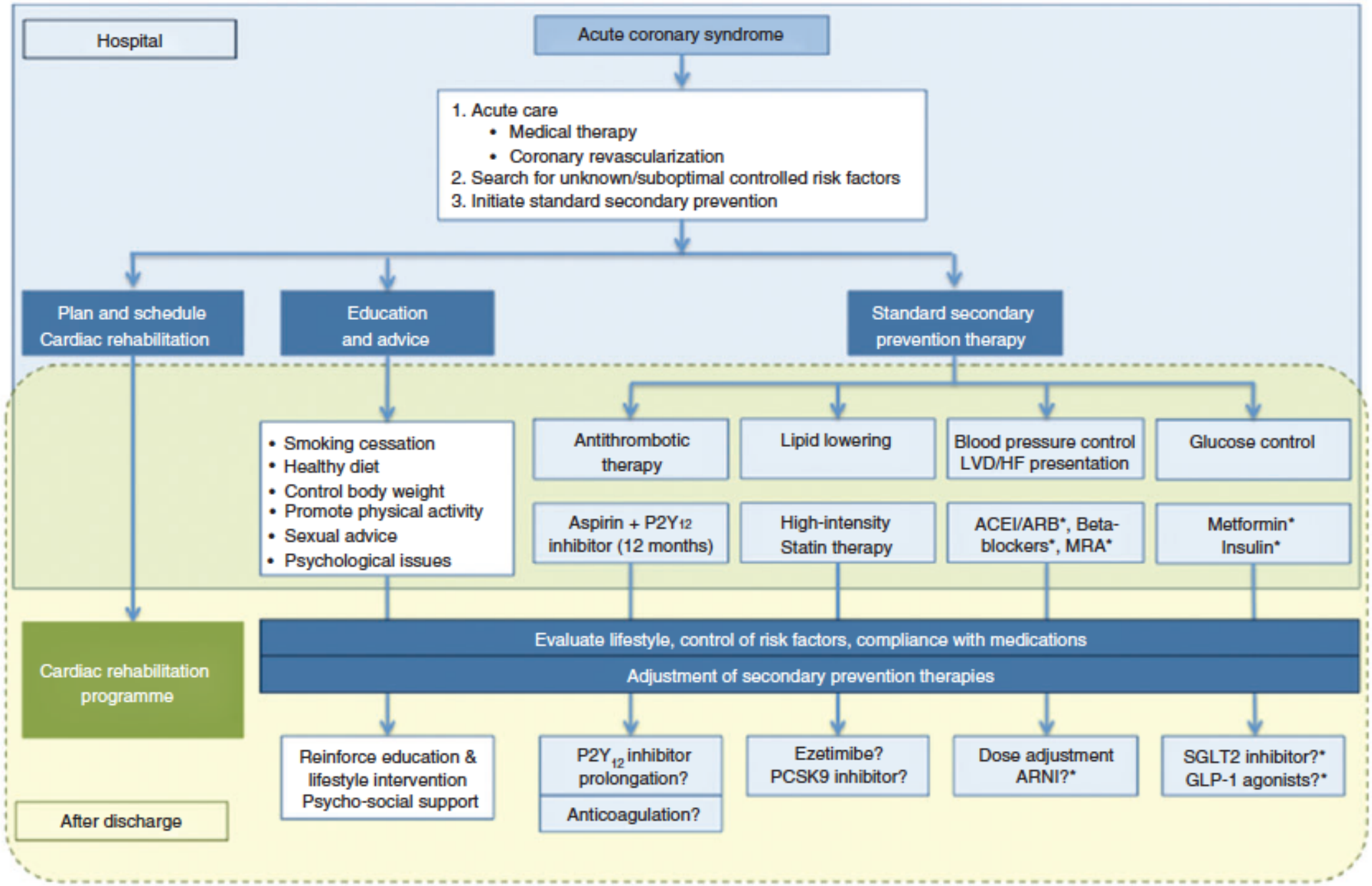
Prevención secundaria post síndrome coronario agudo: puntos a recordar

Dra. Beatriz Eugenia Domínguez Mendez

Prevención secundaria

- La recurrencia de eventos coronarios adversos es mayor en el primer año luego del SCA, persiste a lo largo de la vida.

Cortés-Berigola A., et al. Eur J Prev Cardiol. 2017 Jun;24(3_suppl):22-28.



* When specifically indicated

Cortés-Berigola A., et al. Eur J Prev Cardiol. 2017 Jun;24(3_suppl):22-28.

Cambios en el estilo de vida y control de FR

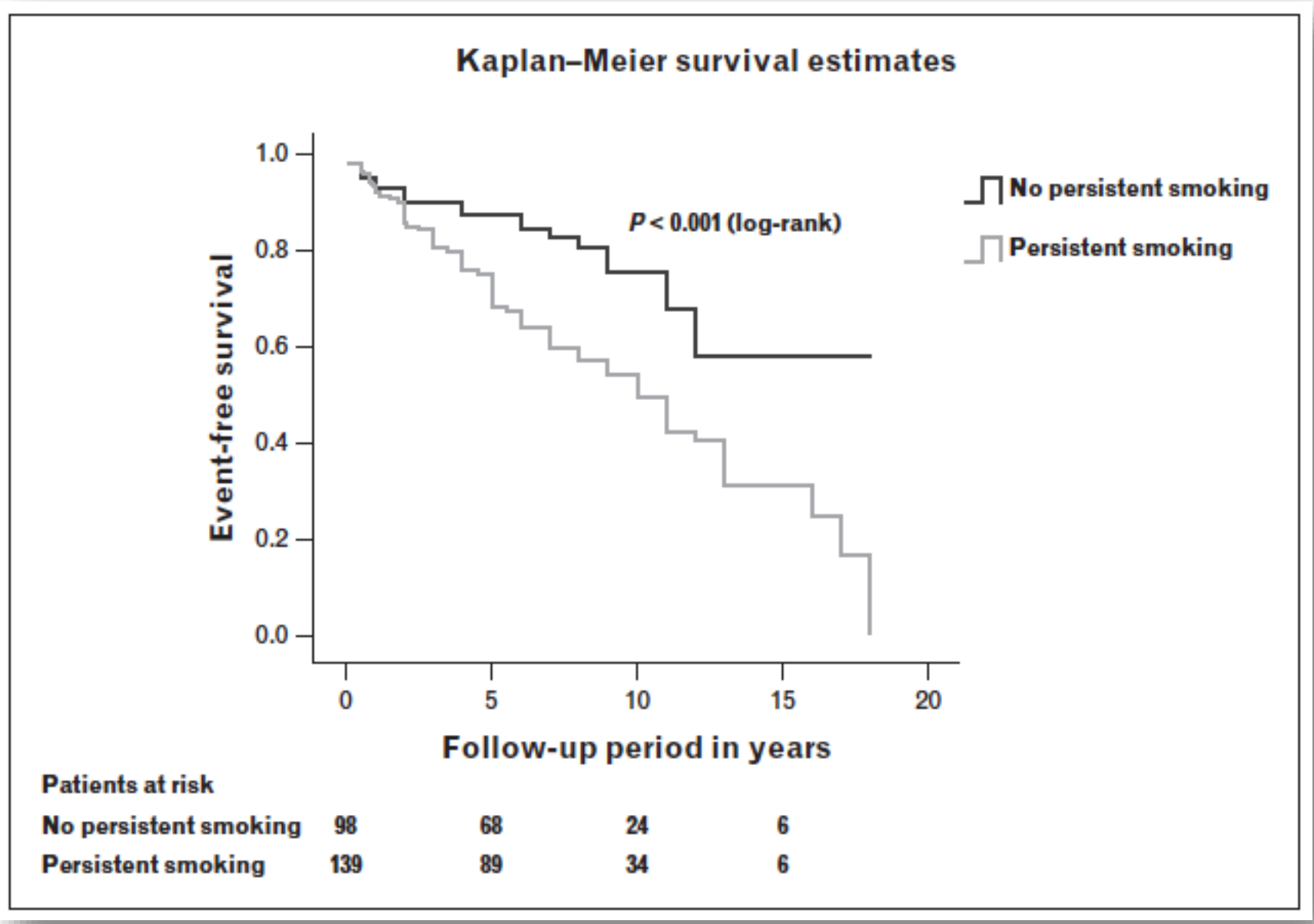
- Cese de tabaquismo
- Dieta, alcohol y control de peso
- Rehabilitación cardiaca
- Reinicio de actividades
- Control de PA
- Adherencia al tratamiento

Ibañez B., et al. Eur Heart J. 2018 Jan 7;39(2):119-177.

Cese de tabaquismo

- Inicio durante hospitalización y continuarse.
- Terapia conductual, bupropión, varenciclina.

Rigotti N., el al. Cochrane Database Syst Rev 2012;5:CD001837.
Rallidis L., et al. Curr Opin Cardiol 2016;31(5):531–536.



Rallidis L., et al. Am Heart J 2015; 169:356–362.

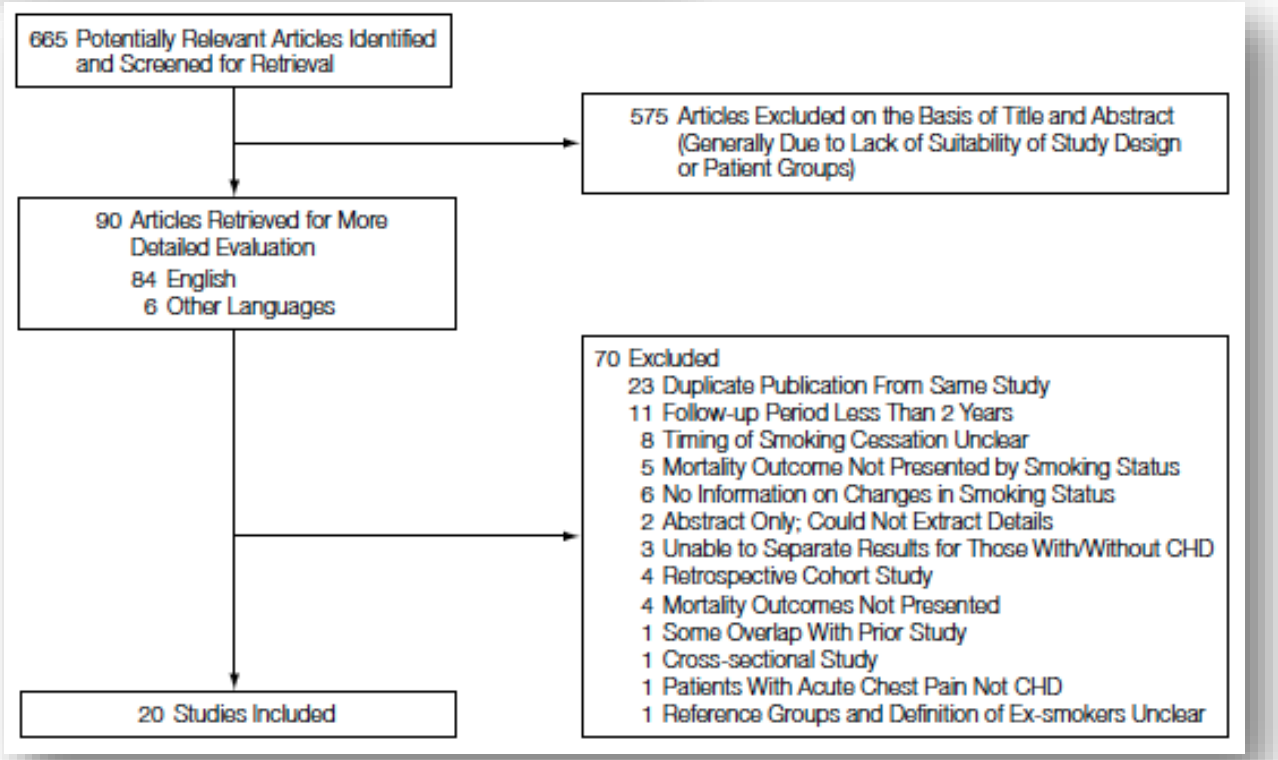
Mortality Risk Reduction Associated With Smoking Cessation in Patients With Coronary Heart Disease

A Systematic Review

Meta-análisis 20 estudios observacionales.

12,603 pacientes.

Reducción del 36% de la mortalidad en quienes cesaban el hábito.
(RR, 0.64; 95% CI 0.58-0.71)



Critchley J., et al. JAMA 2003;290(1):86–97.

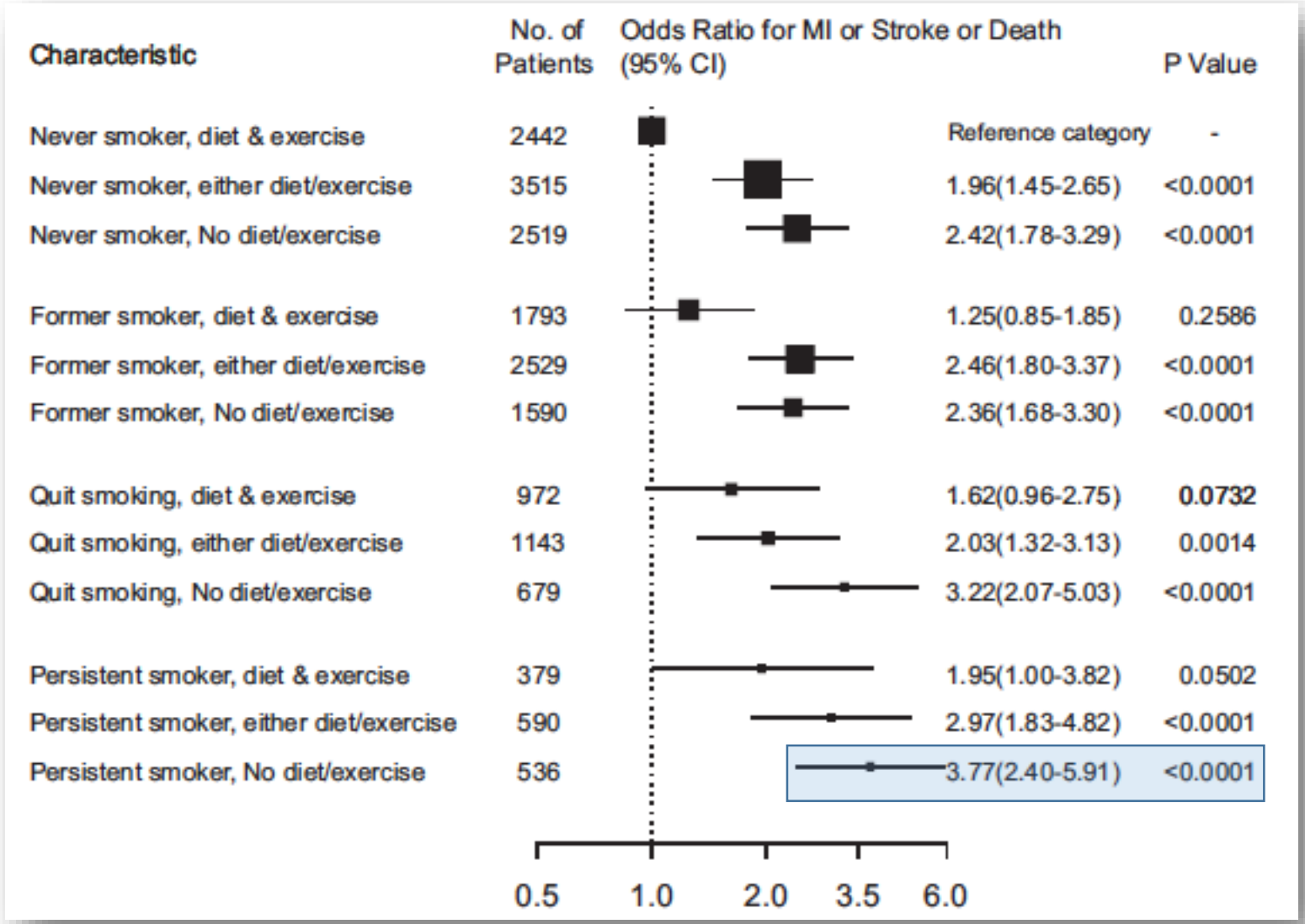
Association of Diet, Exercise, and Smoking Modification With Risk of Early Cardiovascular Events After Acute Coronary Syndromes

Relationship Between Smoking and Repeat Cardiovascular Events in Patients With ACS

	Risk of MI		Risk of Stroke		Risk of Death		Risk of Death/MI/Stroke	
Category	OR (95% CI)	*P*	OR (95% CI)	*P*	OR (95% CI)	*P*	OR (95% CI)	*P*
Persistent smoker	Reference		Reference		Reference		Reference	
Quitter	0.57 (0.36–0.89)	0.0145	0.40 (0.14–1.17)	0.0930	0.93 (0.59–1.46)	0.7594	0.74 (0.53–1.02)	0.0698
Ex-smoker	0.68 (0.48–0.98)	0.3990	0.79 (0.36–1.74)	0.5547	0.65 (0.44–0.97)	0.0360	0.68 (0.51–0.90)	0.0067
Never smoker	0.49 (0.34–0.71)	0.0002	0.83 (0.38–1.82)	0.6397	0.59 (0.40–0.89)	0.0108	0.59 (0.44–0.78)	0.0002

Models were adjusted for age; sex; region; history of hypertension, diabetes, and prior MI; body mass index; creatinine; PCI/CABG before 30 days; and use of β-blockers, statins, antiplatelets, and ACE/ARB drugs at 30 days.

Chow C., et al. Circulation 2010;121(6):750–758.



Chow C., et al. Circulation 2010;121(6):750–758.

Dieta

- Similar a la mediterránea, máximo del 10% del total de la ingesta calórica en grasas saturadas.
- Ingesta de sal < 5 g por día
- 30-45 gramos de fibra al día
- Al menos 200 g frutas y 200 g de vegetales al día
- Pescado 1-2 veces a la semana
- 30 g de frutos secos sin sal
- Ingesta limitada de alcohol (2 copas al día ♂ y 1 copa al día ♀)
- Evitar el consumo de bebidas edulcoradas

Piepoli M., et al. Eur Heart J 2016;37(29):2315–2381.

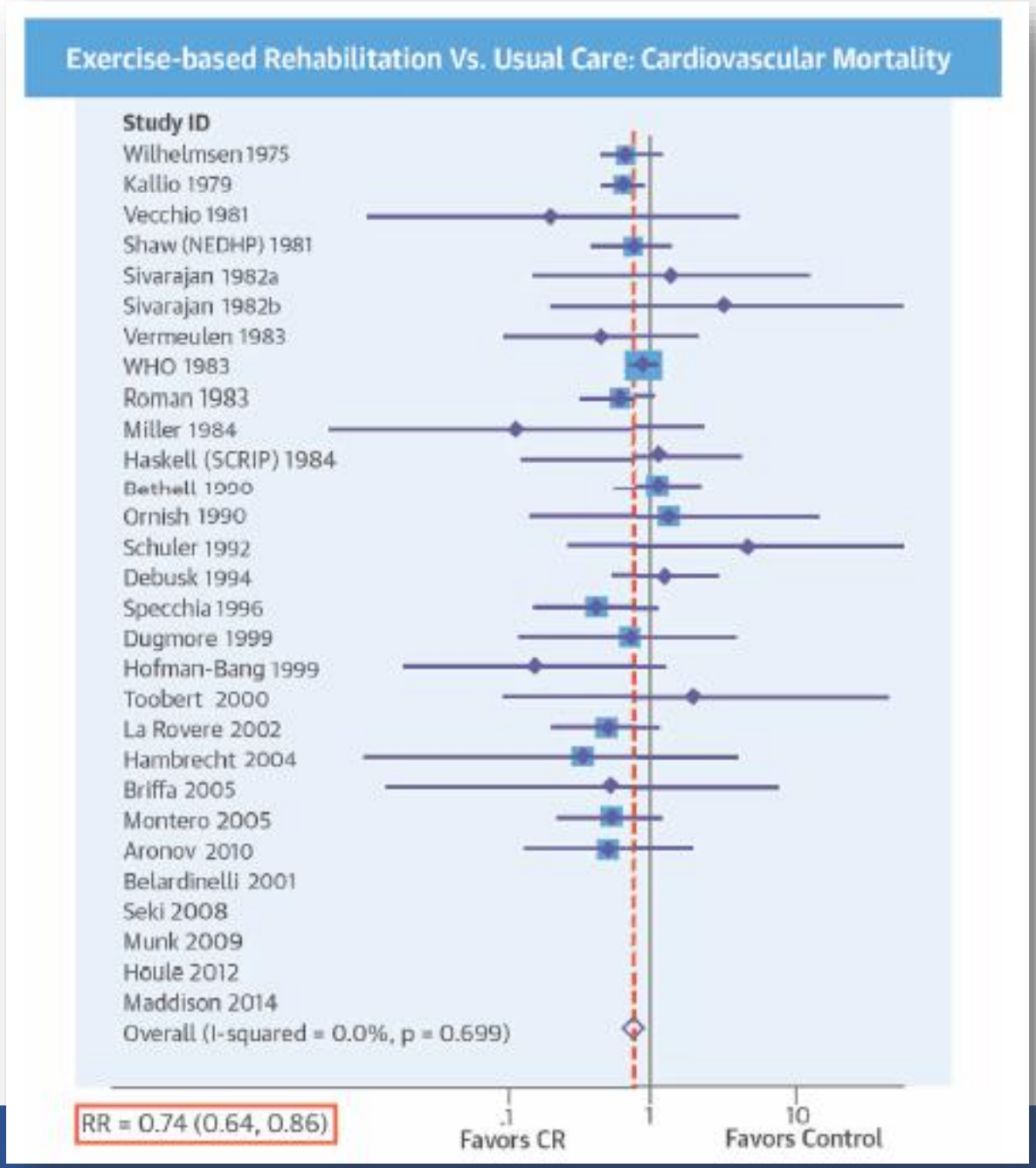
Rehabilitación cardiaca

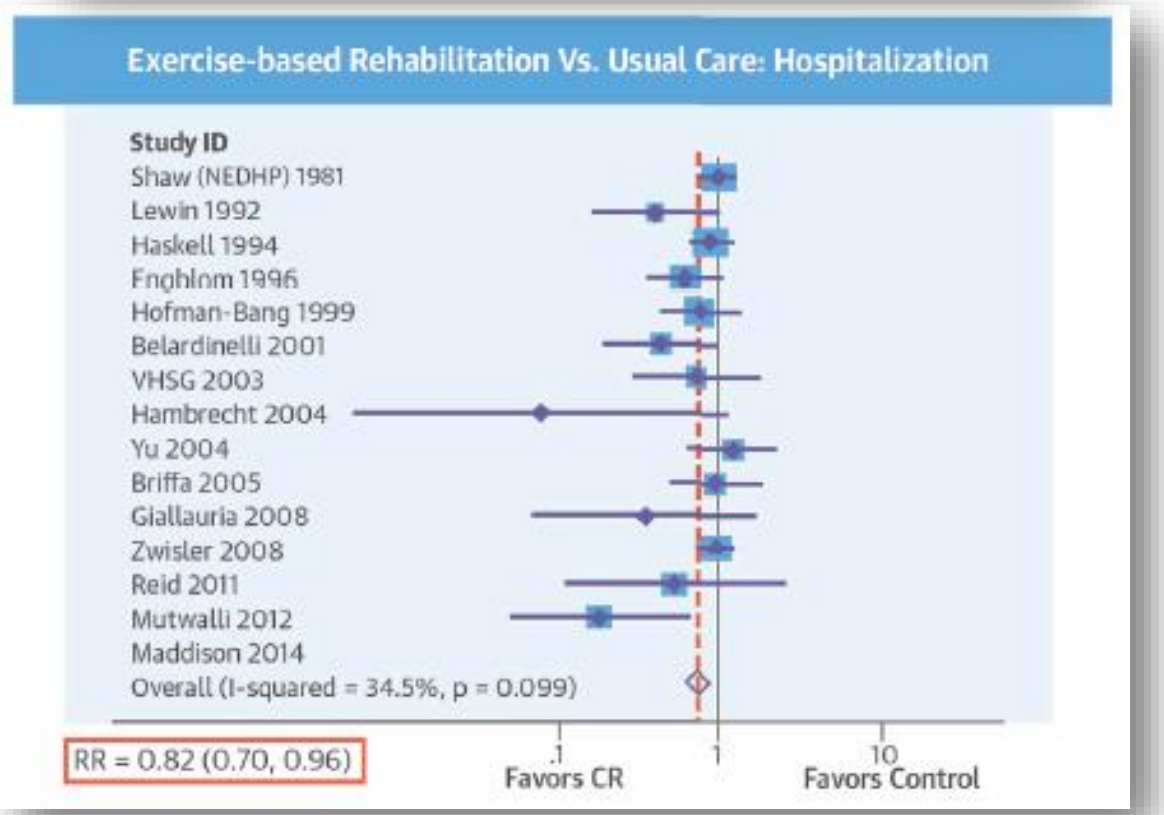
- Se recomienda la participación de todos los pacientes en un programa de rehabilitación cardiaca.
- Ejercicio físico, modificación de FR, educación, control de estrés, apoyo psicológico.
- Programas ambulatorios de 8-24 semanas.

Ibañez B., et al. Eur Heart J. 2018 Jan 7;39(2):119-177.

Exercise-Based Cardiac Rehabilitation for Coronary Heart Disease

Cochrane Systematic Review and Meta-Analysis





Reducción del 26% de mortalidad cardiaca.
Reducción del 18% en hospitalizaciones.

Anderson, L. et al. J Am Coll Cardiol. 2016; 67(1):1–12.

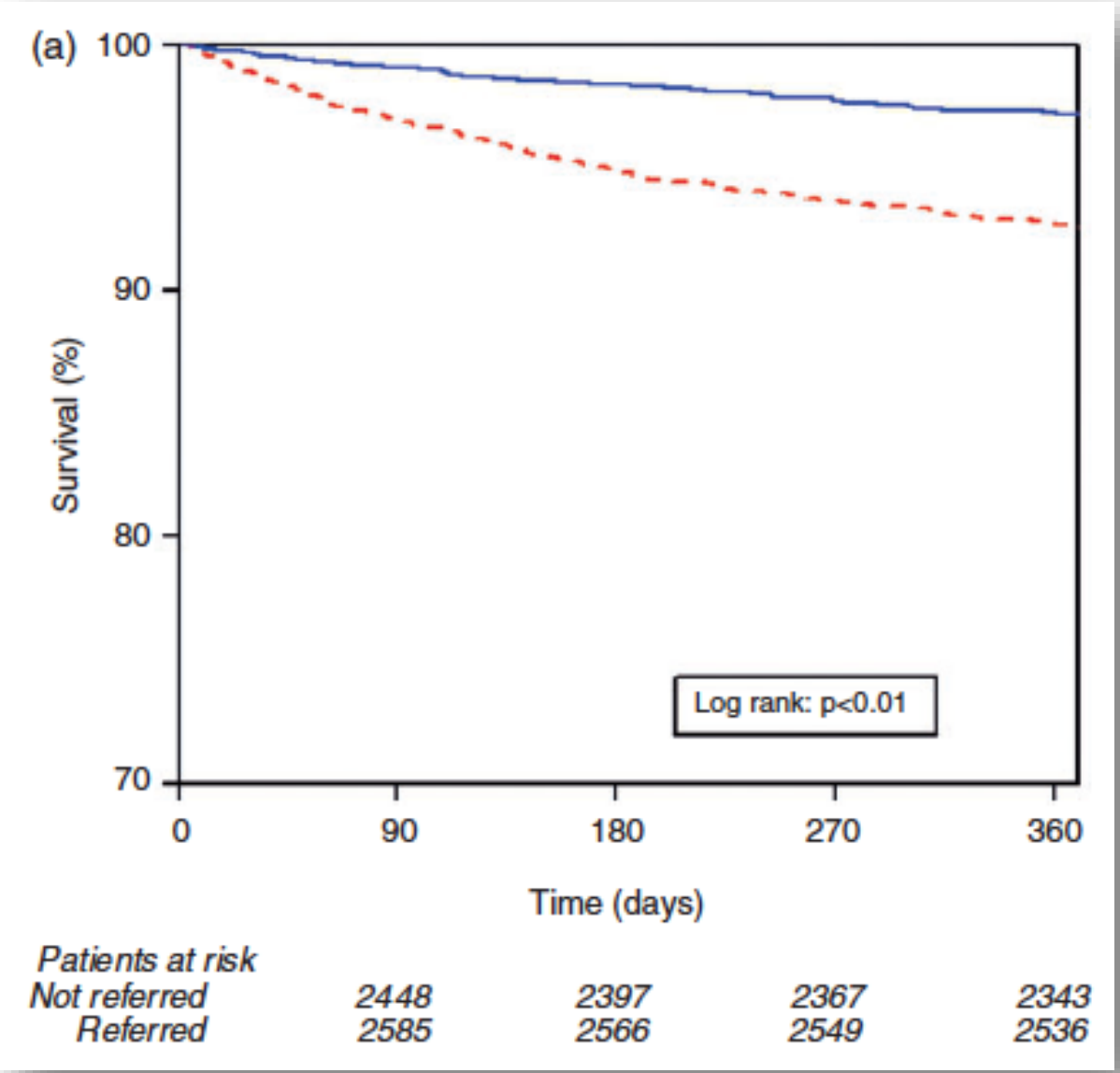


Table 2. Independent variables associated with one-year mortality after discharge comparing referral to cardiac rehabilitation (CR) vs non-referral, utilizing a multivariate model with propensity score adjustment.[a]

Predictor	Adjusted hazard ratio	95% CI	*p* Value
Referral to CR	0.73	0.51–0.97	0.03
Admission Killip class > I	2.84	2.09–3.84	<0.001
Admission heart rate > 100 bpm	1.09	0.58–2.05	0.79
PCI during hospitalization	0.45	0.31–0.65	<0.001
Admission SBP < 100 mm Hg	1.52	1.11–2.09	0.001
Post myocardial infarction LVEF < 30%[b]	1.62	1.21–2.31	<0.001

BPM: beats per minute; CI: confidence interval; CR: cardiac rehabilitation; LVEF: left ventricular ejection fraction; PCI: percutaneous coronary intervention; SBP: systolic blood pressure.

[a]The model was further adjusted for age and gender.

[b]Echocardiographic LVEF assessment obtained during index hospitalization.

Chernomordik F., et al. Eur J Prev Cardiol. 2017 Jan;24(2):123-132.

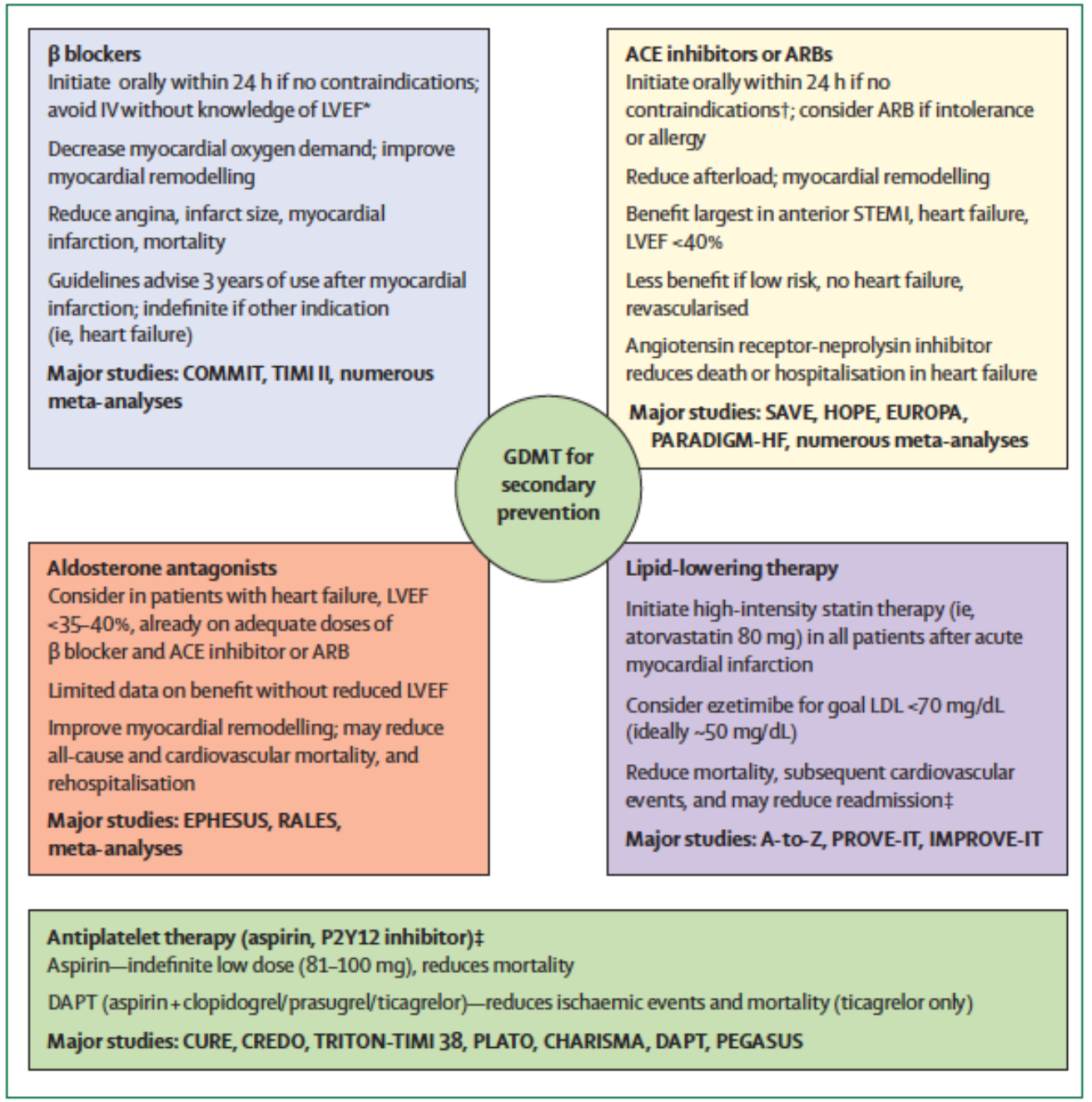
Association of Diet, Exercise, and Smoking Modification With Risk of Early Cardiovascular Events After Acute Coronary Syndromes

Relationship Between Diet/Exercise Modification and Repeat Cardiovascular Events in Patients With ACS

	Risk of MI		Risk of Stroke		Risk of Death		Risk of Death/MI/Stroke	
Category	OR (95% CI)	*P*	OR (95% CI)	*P*	OR (95% CI)	*P*	OR (95% CI)	*P*
No diet/exercise	Reference		Reference		Reference		Reference	
Diet only	0.93 (0.74–1.16)	0.5137	0.84 (0.54–1.31)	0.4357	0.91 (0.73–1.13)	0.3986	0.91 (0.77–1.07)	0.2605
Exercise only	0.78 (0.56–1.1)	0.1547	0.94 (0.52–1.68)	0.8256	0.61 (0.42–0.88)	0.0091	0.69 (0.54–0.89)	0.0037
Both diet and exercise	0.52 (0.40–0.69)	<0.0001	0.46 (0.26–0.82)	0.0079	0.45 (0.33–0.60)	<0.0001	0.46 (0.38–0.57)	<0.0001

Models were adjusted for age; sex; region; history of hypertension, diabetes, and prior MI; body mass index; creatinine; PCI/CABG before 30 days; and use of β-blockers, statins, antiplatelets, and ACE/ARB drugs at 30 days.

Chow C., et al. Circulation 2010;121(6):750–758.

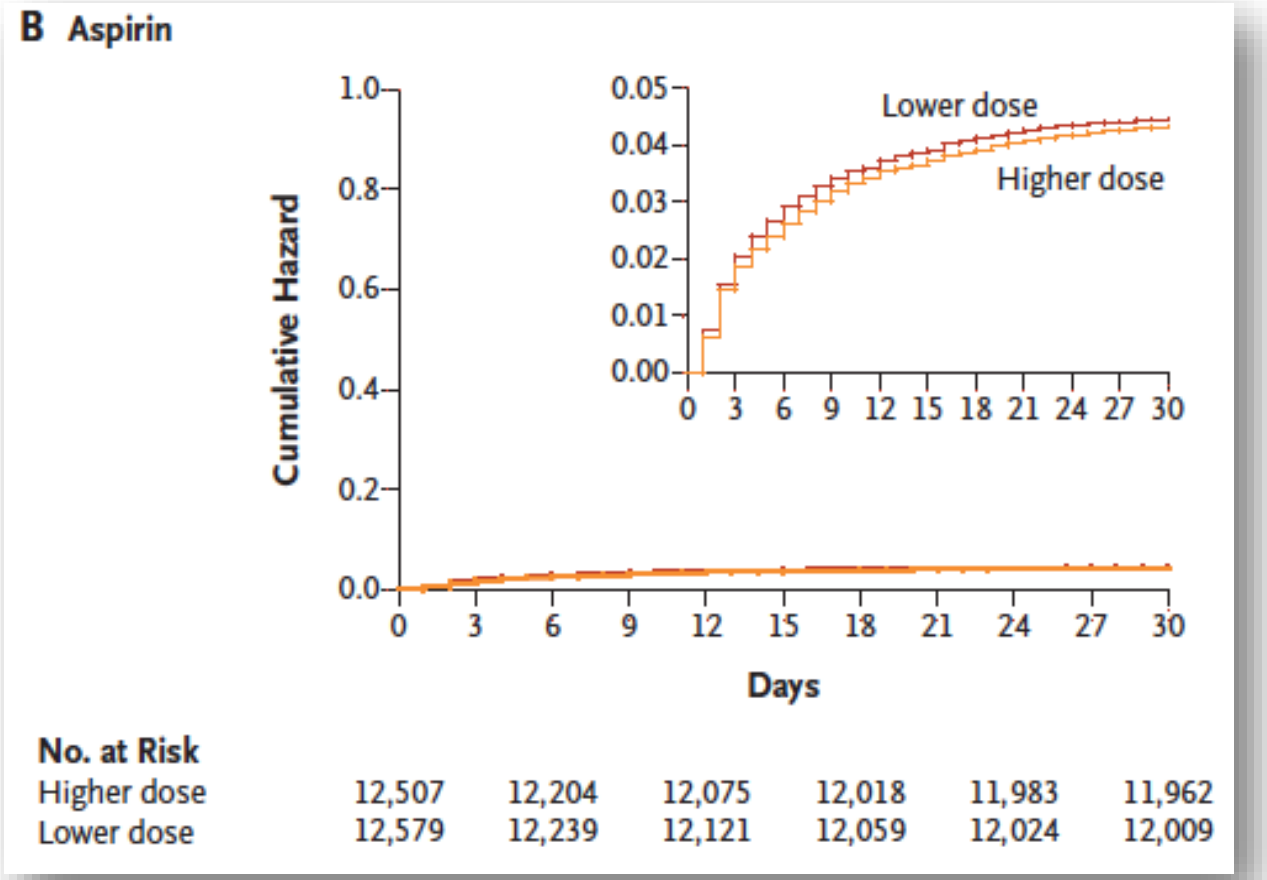


Reed G., et al. Lancet 2017 Jan 14;389(10065):197-210.

Terapia antitrombótica

- Aspirina – duración indefinida 75 a 100 mg VO cada 24 h.

- CURRENT – OASIS 7
  - No diferencia significativa con respecto al resultado primario entre dosis alta y baja de ASA (4.2% vs. 4.4%; hazard ratio, 0.97; 95% CI, 0.86 to 1.09; P = 0.61)



Mehta S., et al. N Engl J Med 2010;363:930-42.

Doble antiagregación plaquetaria

- ASA + inhibidor PY12 en pacientes tratados con fibrinólisis por al menos 1 mes, a considerar 12 meses.

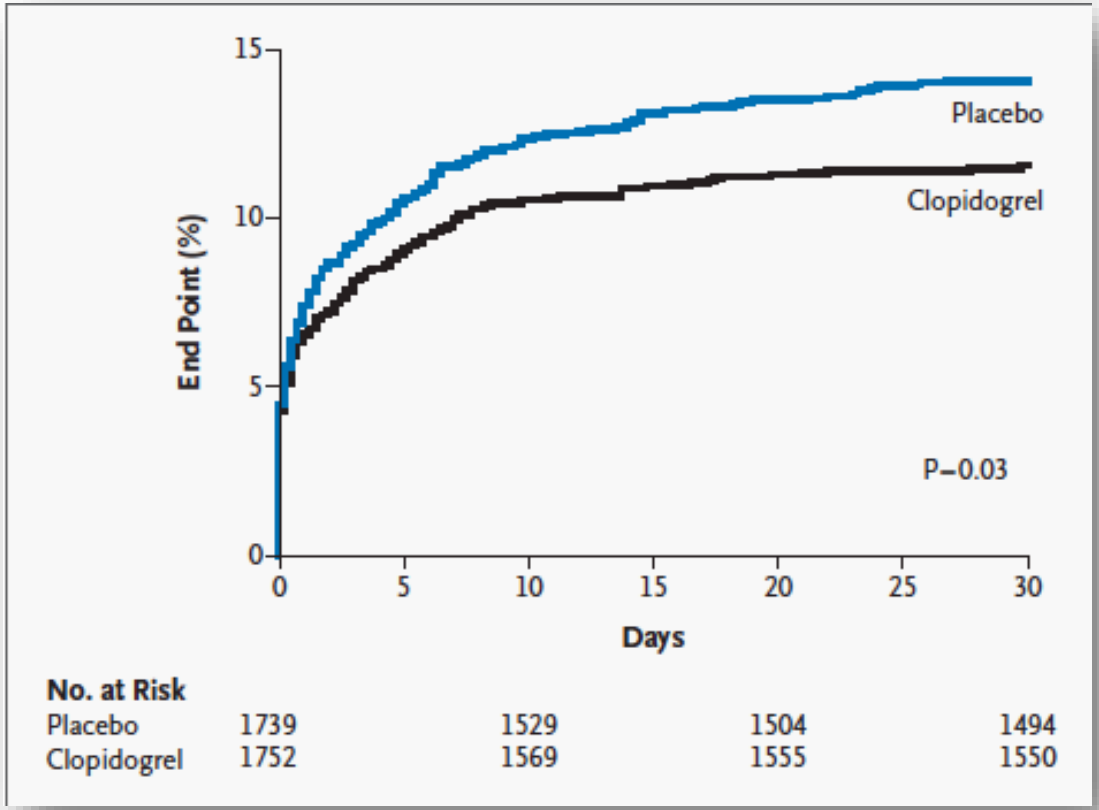
- Si fibrinólisis + angioplastía 12 meses al menos (48 horas clopidogrel, luego considerar ticagrelor/prasugrel).

- ASA + inhibidor PY12 en pacientes con angioplastía por al menos 12 meses (o más).

Ibañez B., et al. Eur Heart J. 2018 Jan 7;39(2):119-177.

Addition of Clopidogrel to Aspirin and Fibrinolytic Therapy for Myocardial Infarction with ST-Segment Elevation

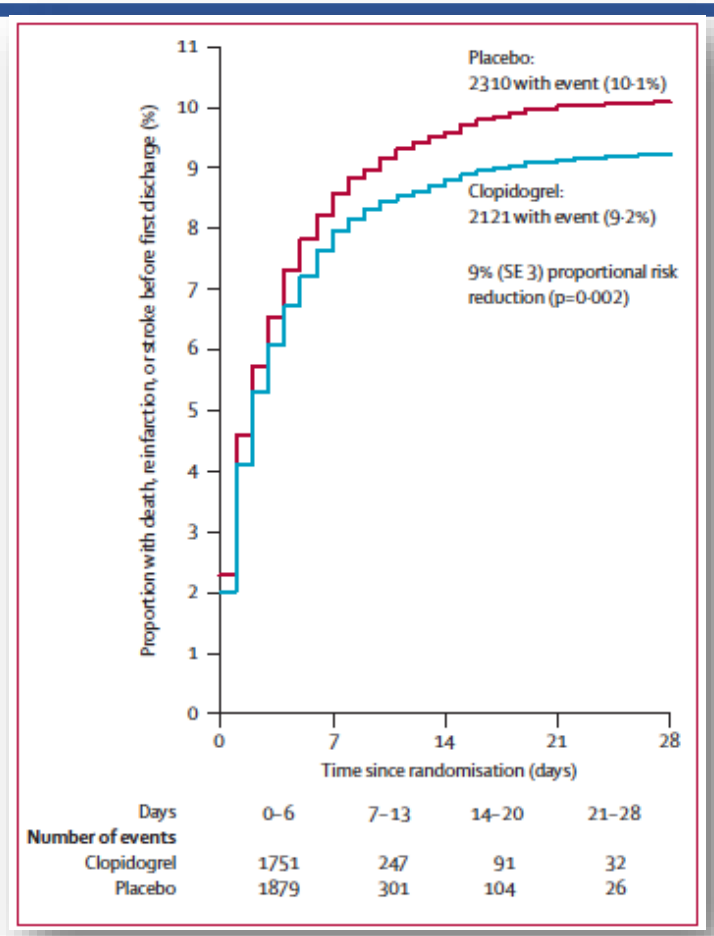
Marc S. Sabatine, M.D., M.P.H., Christopher P. Cannon, M.D., C. Michael Gibson, M.D., Jose L. López-Sendón, M.D., Gilles Montalescot, M.D., Pierre Theroux, M.D., Marc J. Claeys, M.D., Ph.D., Frank Cools, M.D., Karen A. Hill, B.A., Allan M. Skene, Ph.D., Carolyn H. McCabe, B.S., and Eugene Braunwald, M.D., for the CLARITY–TIMI 28 Investigators*



Disminución de riesgo del 20%.

Addition of clopidogrel to aspirin in 45 852 patients with acute myocardial infarction: randomised placebo-controlled trial

COMMIT (CLOpidogrel and Metoprolol in Myocardial Infarction Trial) collaborative group*



Disminución de riesgo del 9%.

Sabatine M., et al. N Engl J Med 2005;352(12):1179–1189.
Chen Z., et al. Lancet 2005;366(9497):1607–1621.

Twelve or 30 Months of Dual Antiplatelet Therapy after Drug-Eluting Stents

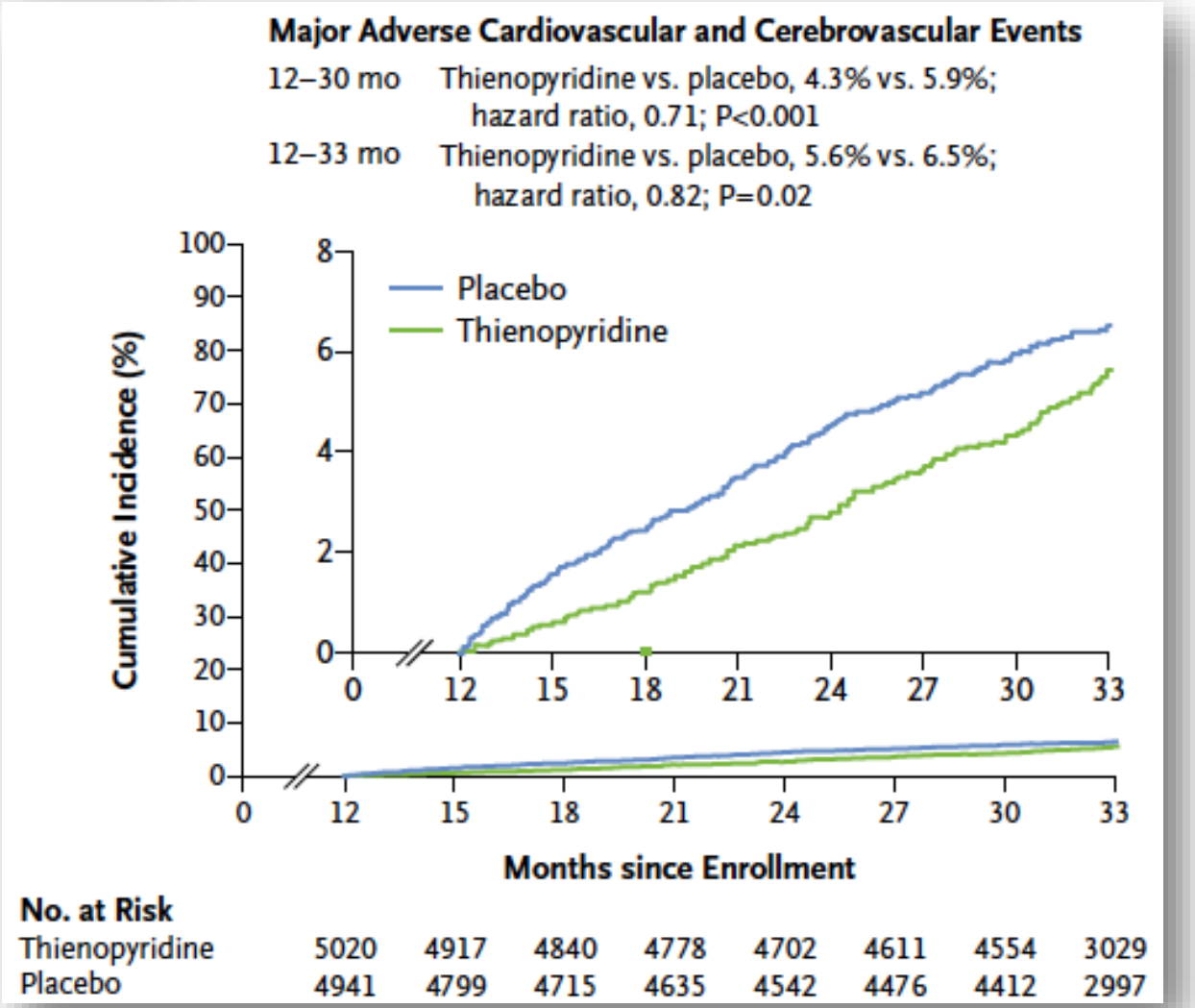
DAPT Study Investigators

Estudio aleatorizado, 9961 pacientes.

Tienopiridina o placebo luego de completar el año de tratamiento (+ASA).

Reducción de tasas de trombosis de stent (0.4% vs. 1.4%; HR, 0.29 [95% CI, 0.17 a 0.48]; P<0.001) y eventos cardiovasculares y cerebrovasculares mayores (4.3% vs. 5.9%; HR, 0.71 [95% CI, 0.59 to 0.85]; P<0.001

Aumento del riesgo de sangrado.



Mauri L., et al. N Engl J Med 2014;371:2155-66.

Long-Term Use of Ticagrelor in Patients with Prior Myocardial Infarction

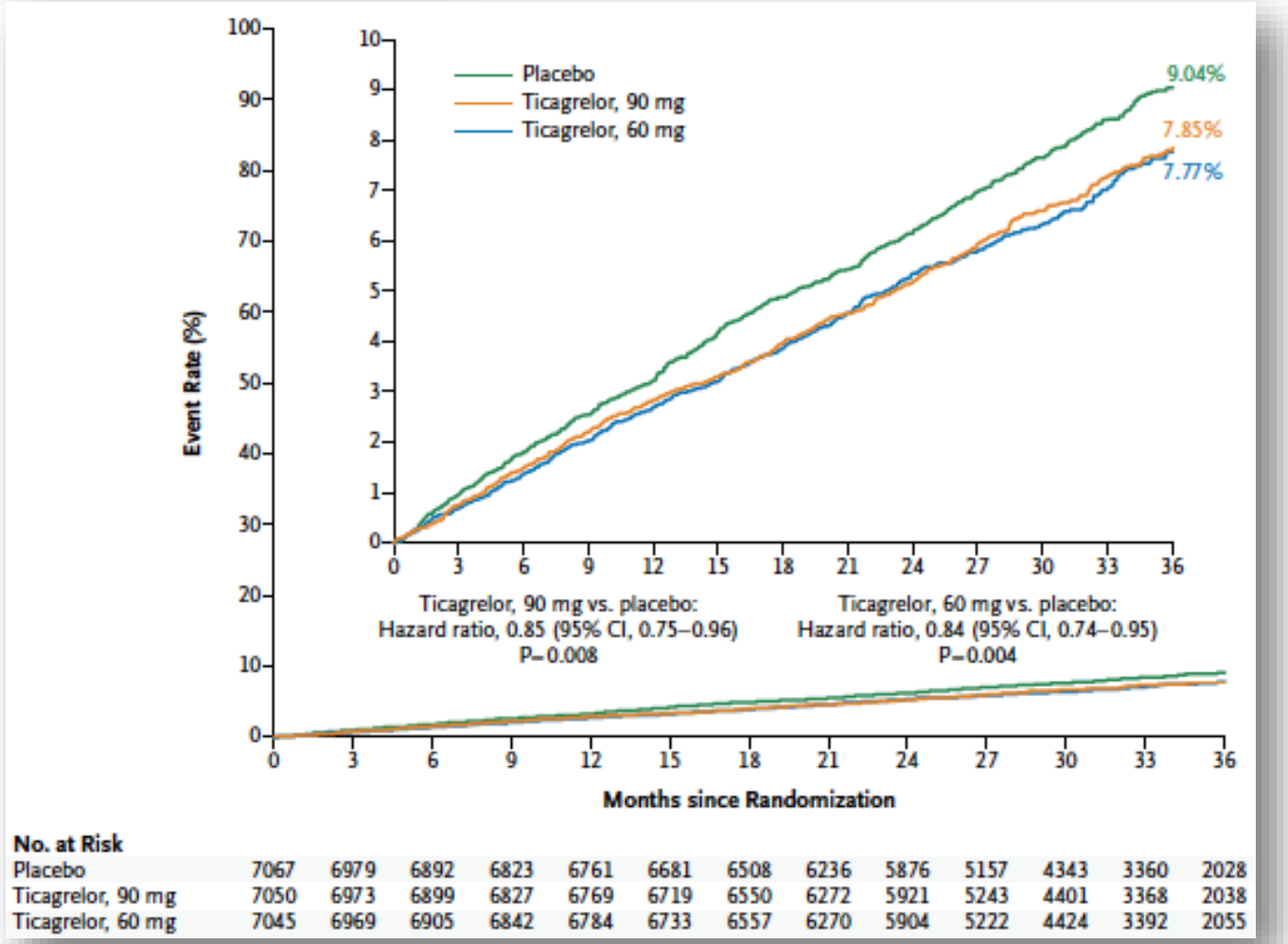
PEGASUS-TIMI 54 Steering Committee and Investigators

Estudio doble ciego, aleatorizado, 21,162 pacientes. Ticagrelor 90 mg, 60 mg, placebo.

Punto final primario de eficacia: compuesto de muerte CV, IM o ictus.

HR 90 mg of ticagrelor vs. placebo, 0.85; 95% CI, 0.75 a 0.96; P = 0.008; HR 60 mg of ticagrelor vs. placebo, 0.84; 95% CI, 0.74 a 0.95; P = 0.004

Aumento de tasa de sangrado mayor.



Bonaca m., et al. N Engl J Med 2015;372:1791-800.

Rivaroxaban in Patients Stabilized After a ST-Segment Elevation Myocardial Infarction

Results From the ATLAS ACS-2–TIMI-51 Trial (Anti-Xa Therapy to Lower Cardiovascular Events in Addition to Standard Therapy in Subjects with Acute Coronary Syndrome–Thrombolysis In Myocardial Infarction-51)

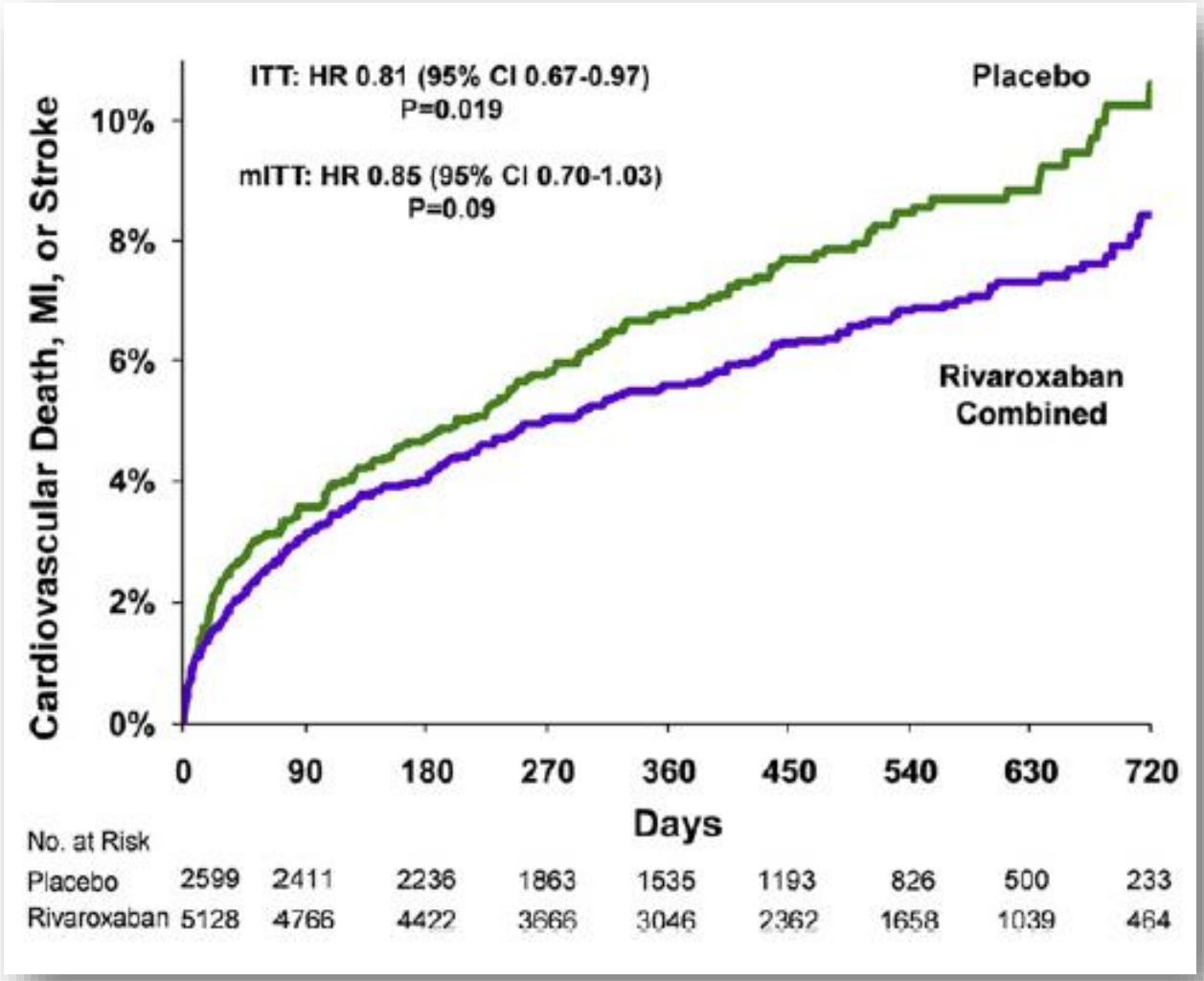
Estudio aleatorizado. 7,815 pacientes con SICACEST.

Rivaroxaban 2.5 mg, 5 mg, placebo.

Reducción del punto final primario de eficacia vs. placebo ITT: 8.4% vs. 10.6% [HR]: 0.81, 95% [CI]: 0.67 a 0.97, p = 0.019.

Aumento de riesgo de sangrado.

Guías ESC: en pacientes seleccionados con bajo riesgo de sangrado, 2.5 mg VO de rivaroxaban (ASA y clopidogrel).



Mega J., et al. J Am Coll Cardiol 2013;61:1853–9 .
Ibañez B., et al. Eur Heart J. 2018 Jan 7;39(2):119-177.

Bloqueadores beta

- Indicación Ia en pacientes con FEVI <o= a 40% en ausencia de contraindicaciones (falla cardiaca aguda, inestabilidad hemodinámica, bloqueo AV de alto grado).
  - CIBIS – II (bisoprolol)
  - MERIT-HF (metoprolol)
  - CAPRICORN (carvedilol)
  - SENIORS (nebivolol)

- En pacientes hemodinámicamente estables debe considerarse su inicio en las primeras 24 horas.

Ibañez B., et al. Eur Heart J. 2018 Jan 7;39(2):119-177.

β Blockade after myocardial infarction: systematic review and meta regression analysis

Nick Freemantle, John Cleland, Philip Young, James Mason, Jane Harrison

Comparison of effect on mortality of different drugs

Drug	Number needed to treat*
β Blockers	42
Angiotensin converting enzyme inhibitors	No long term trials in unselected patients
Antiplatelet agent[22]	153
Statin[29]	94
Calcium channel blockers (diltiazem)[30]	∞
Thrombolysis and aspirin for 4 weeks[16]	24
Warfarin[31 32]	63

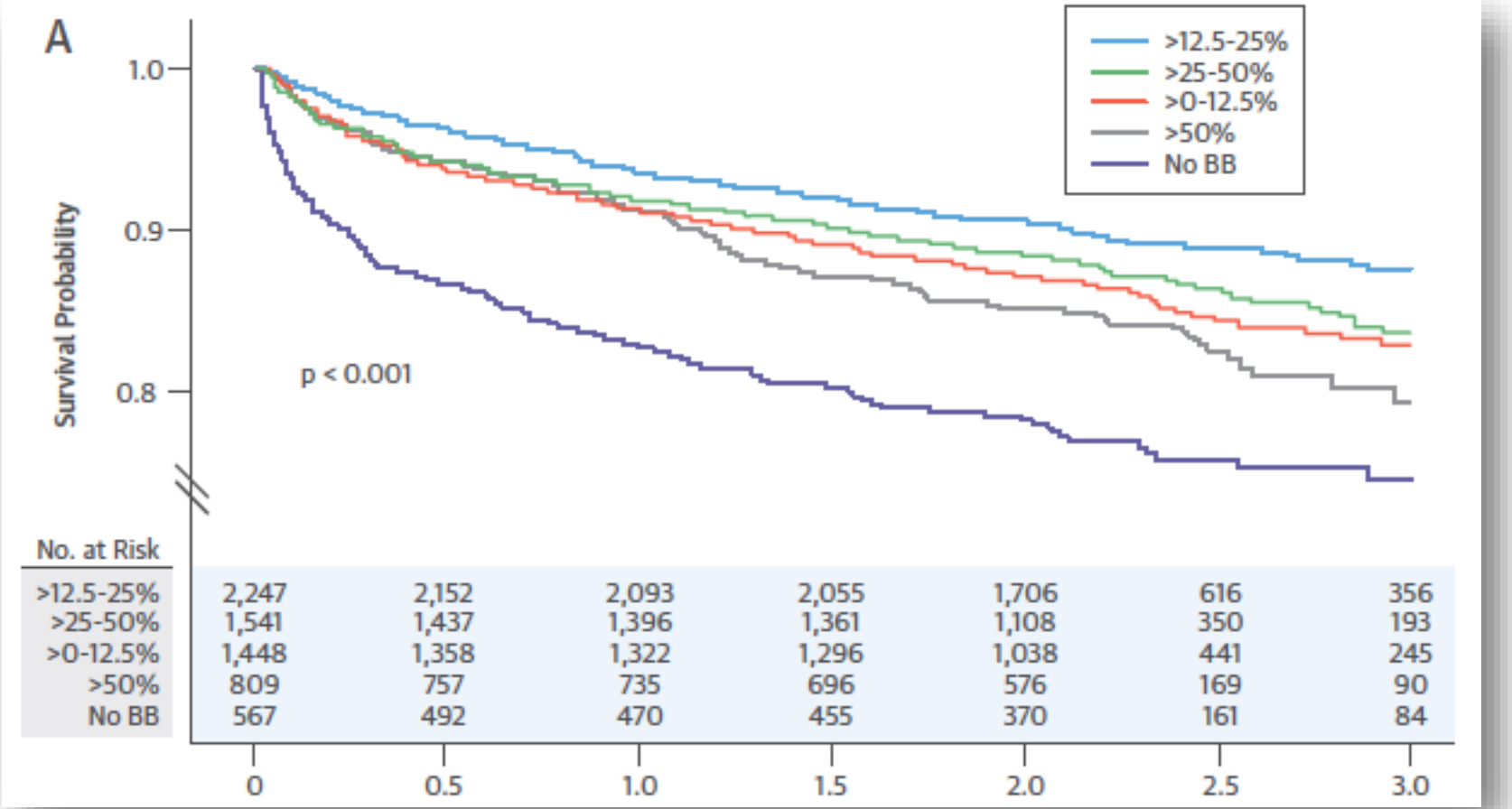
*Number needed to avoid death in 2 years of treatment in unselected patients after myocardial infarction.

Freemantle N., et al. BMJ 1999;318:1730–7

Effect of Beta-Blocker Dose on Survival After Acute Myocardial Infarction

Registro multicéntrico de 7,057 pacientes seriados. Seguimiento 2.1 años.

Reducción del riesgo de mortalidad ajustada con el uso de BB de 45%; 95% [CI]: 33% to 55%).



Goldberger, J.J. et al. J Am Coll Cardiol. 2015; 66(13):1431–41.

Tratamiento hipolipemiante

- Se recomiendan estatinas en todo paciente, independientemente de sus niveles basales de colesterol.
- Se debe iniciar tan pronto como sea posible y a alta intensidad.
- Meta LDL – C <1.8 mmol/L (<70 mg/dl) o reducción del 50% si el nivel basal es de 1-8 – 3.5 mmol/L (70-135 mg/dl).
- Adición de tratamiento si no se alcanzan metas (IMPROVE-IT; FOURIER)

Ibañez B., et al. Eur Heart J. 2018 Jan 7;39(2):119-177.
Piepoli M., et al. Eur Heart J 2016;37(29):2315–2381.

Effects of Atorvastatin on Early Recurrent Ischemic Events in Acute Coronary Syndromes

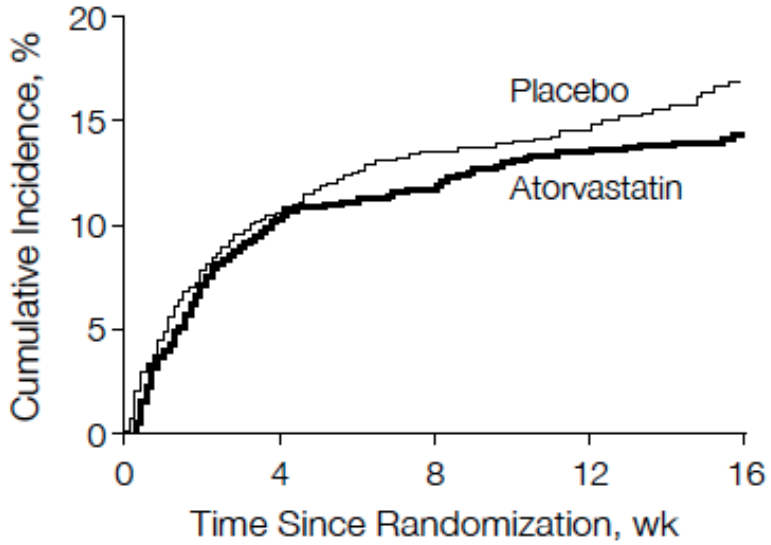
The MIRACL Study: A Randomized Controlled Trial

Estudio aleatorizado, doble ciego, muticéntrico.
3,086 pacientes.

Atorvastatina 80 mg vs. placebo.

Reducción del riesgo de 16% de MACE.

Figure 3. Kaplan-Meier Estimates of Primary Outcomes



No. at Risk					
Atorvastatin	1538	1381	1351	1323	518
Placebo	1548	1384	1338	1318	473

The relative risk of the composite outcome in the atorvastatin group compared with the placebo group was 0.84 (95% confidence interval, 0.70-1.00; $P=.048$), based on a Cox proportional hazards analysis. The decrease in number at risk at 16 weeks reflects the fact that many patients completed the study within the days immediately preceding 16 weeks.

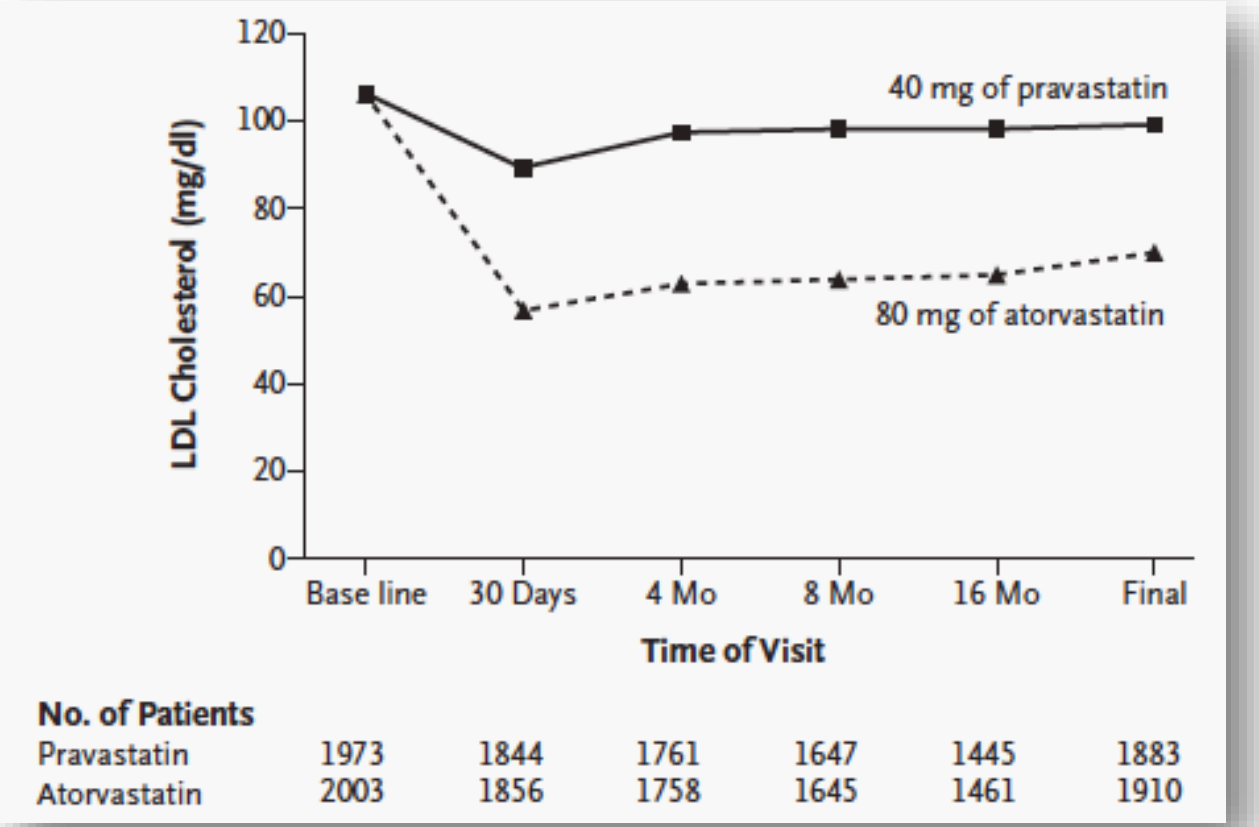
Schwartz G., et al. JAMA 2001;285:1711-1718.

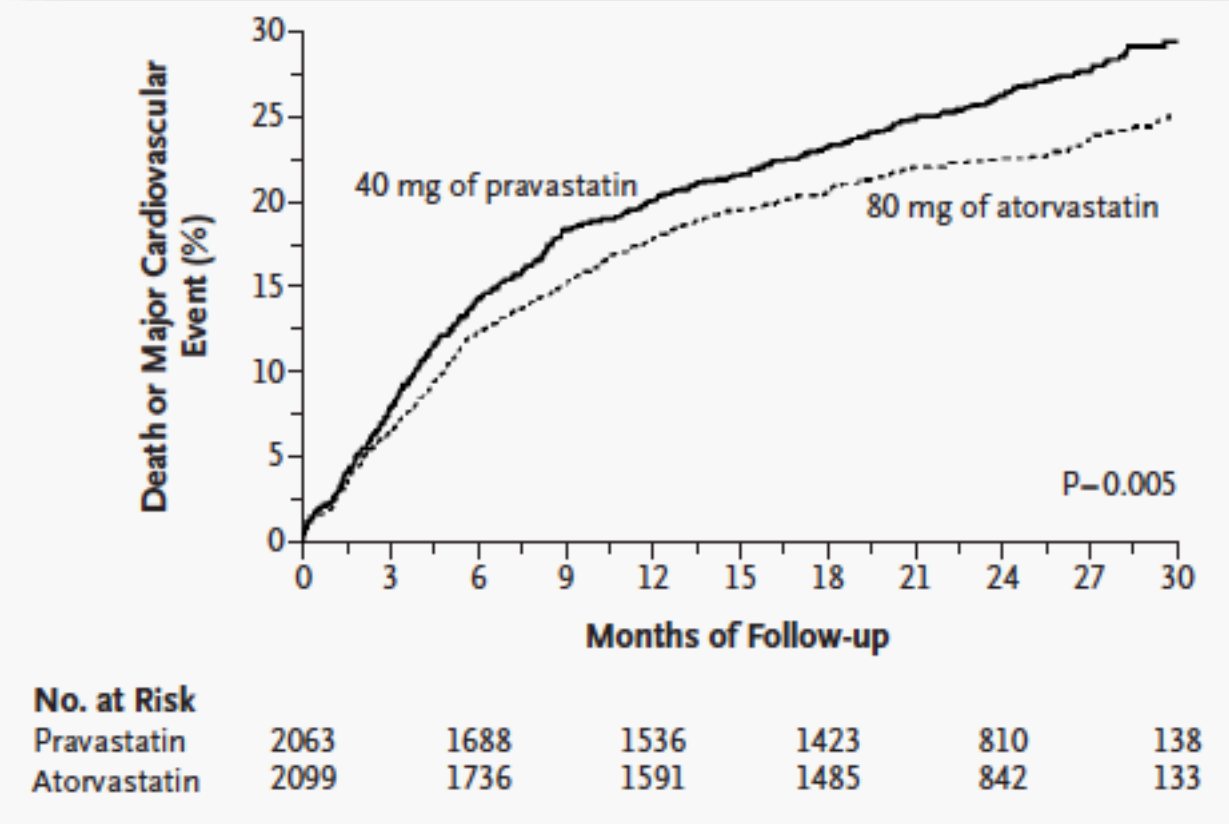
Intensive versus Moderate Lipid Lowering with Statins after Acute Coronary Syndromes

for the Pravastatin or Atorvastatin Evaluation and Infection Therapy–Thrombolysis in Myocardial Infarction 22 Investigators*

4,162 pacientes.

Reducción del 16% del HR a favor de atorvastatina.
(P = 0.005; 95% CI, 5-26%)





Cannon C., et al. N Engl J Med 2004;350:1495-504. PROVE-IT – TIMI 22

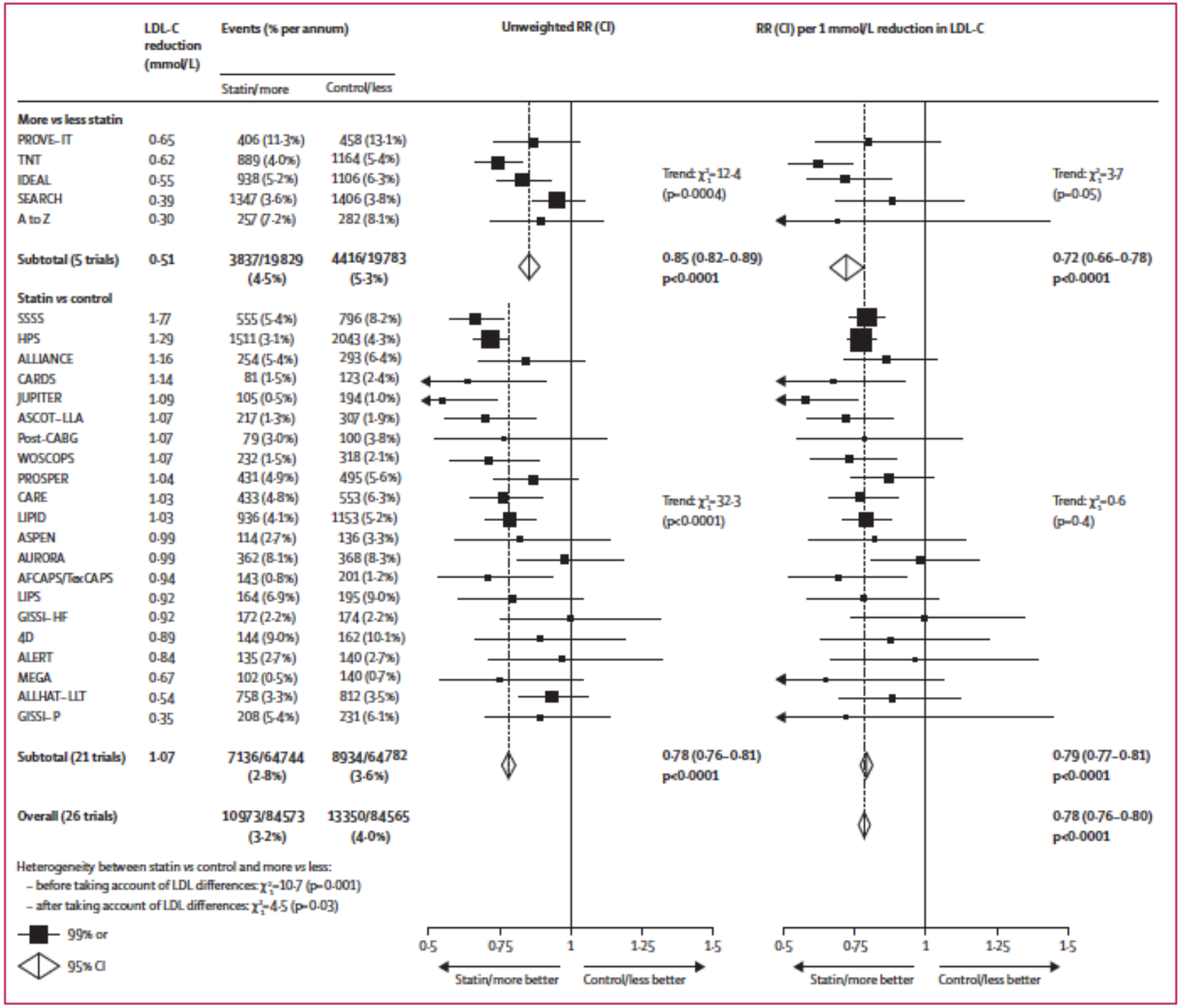
Efficacy and safety of more intensive cholesterol: a meta-analysis of data fr in 26 randomised trials

Cholesterol Treatment Trialists' (CTT) Collaboration*

5 estudios dosis intensiva vs. menos intensiva de estatina (39,612 pacientes). 21 estudios estatinas vs. placebo (129,526 pacientes).

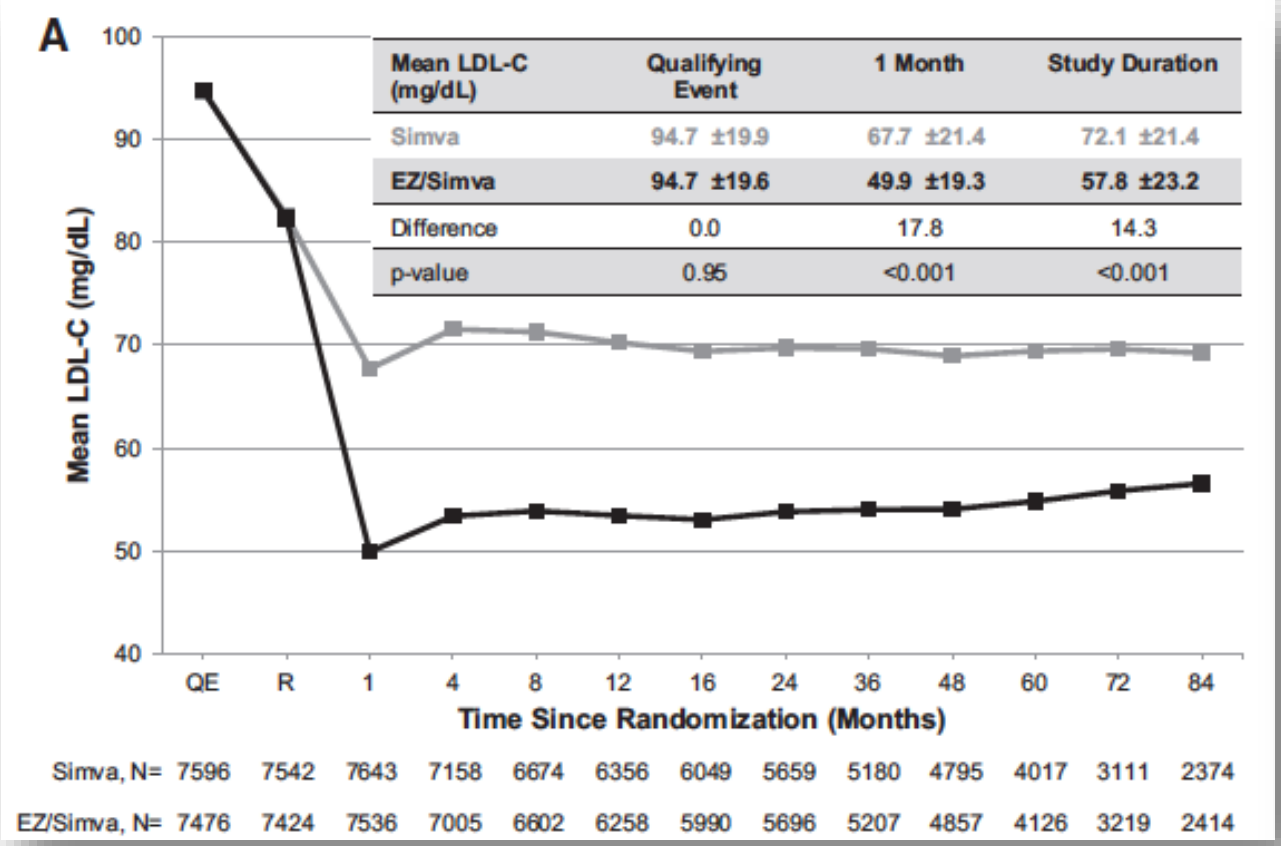
Regímenes más intensos 15% de reducción de MACE.

Por cada 1 mmol/L de reducción de LDL, reducción del 22% de riesgo de MACE.

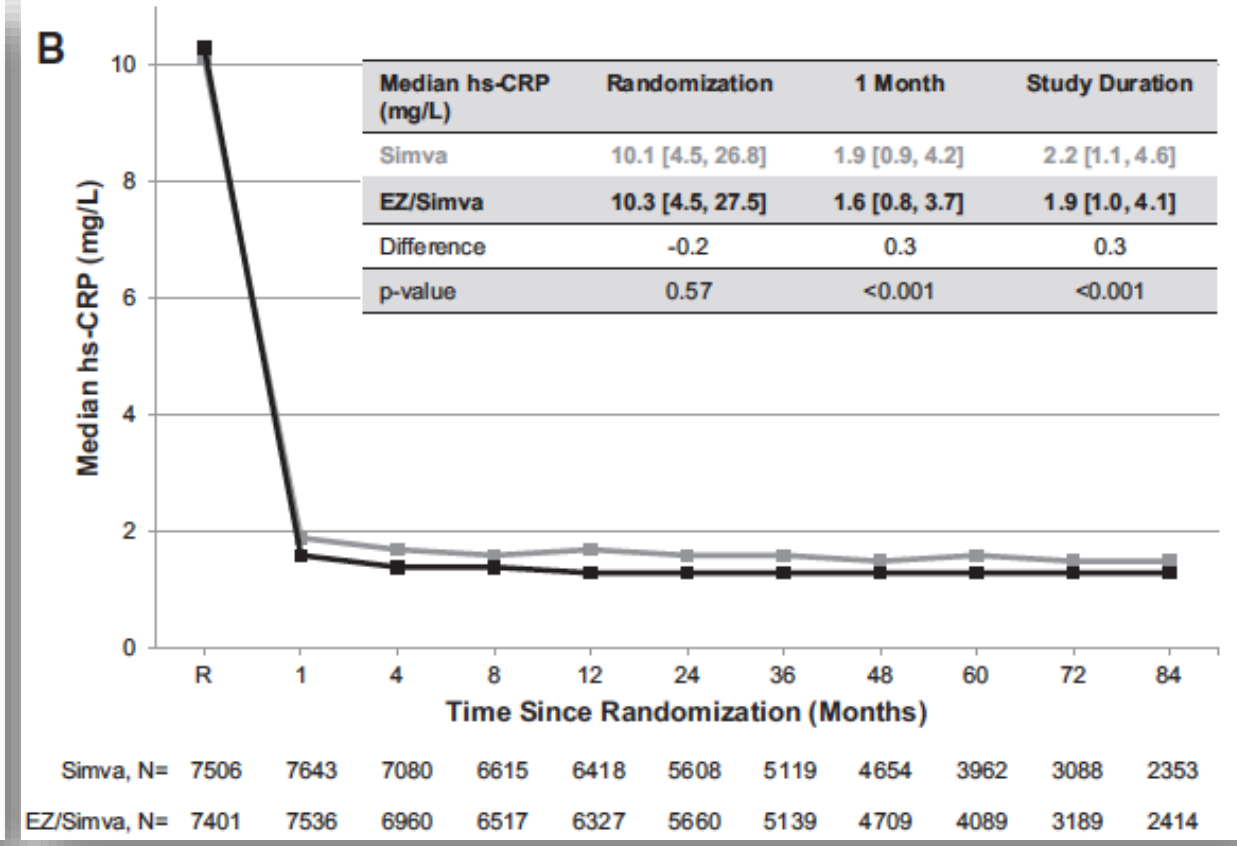


Baigent C., et al. Lancet 2010; 376: 1670–81.

Achievement of Dual Low-Density Lipoprotein Cholesterol and High-Sensitivity C-Reactive Protein Targets More Frequent With the Addition of Ezetimibe to Simvastatin and Associated With Better Outcomes in IMPROVE-IT



Mean LDL-C (mg/dL)	Qualifying Event	1 Month	Study Duration
Simva	94.7 ±19.9	67.7 ±21.4	72.1 ±21.4
EZ/Simva	**94.7 ±19.6**	**49.9 ±19.3**	**57.8 ±23.2**
Difference	0.0	17.8	14.3
p-value	0.95	<0.001	<0.001



Median hs-CRP (mg/L)	Randomization	1 Month	Study Duration
Simva	10.1 [4.5, 26.8]	1.9 [0.9, 4.2]	2.2 [1.1, 4.6]
EZ/Simva	**10.3 [4.5, 27.5]**	**1.6 [0.8, 3.7]**	**1.9 [1.0, 4.1]**
Difference	-0.2	0.3	0.3
p-value	0.57	<0.001	<0.001

Bohula E., et al. Circulation. 2015;132:1224-1233.

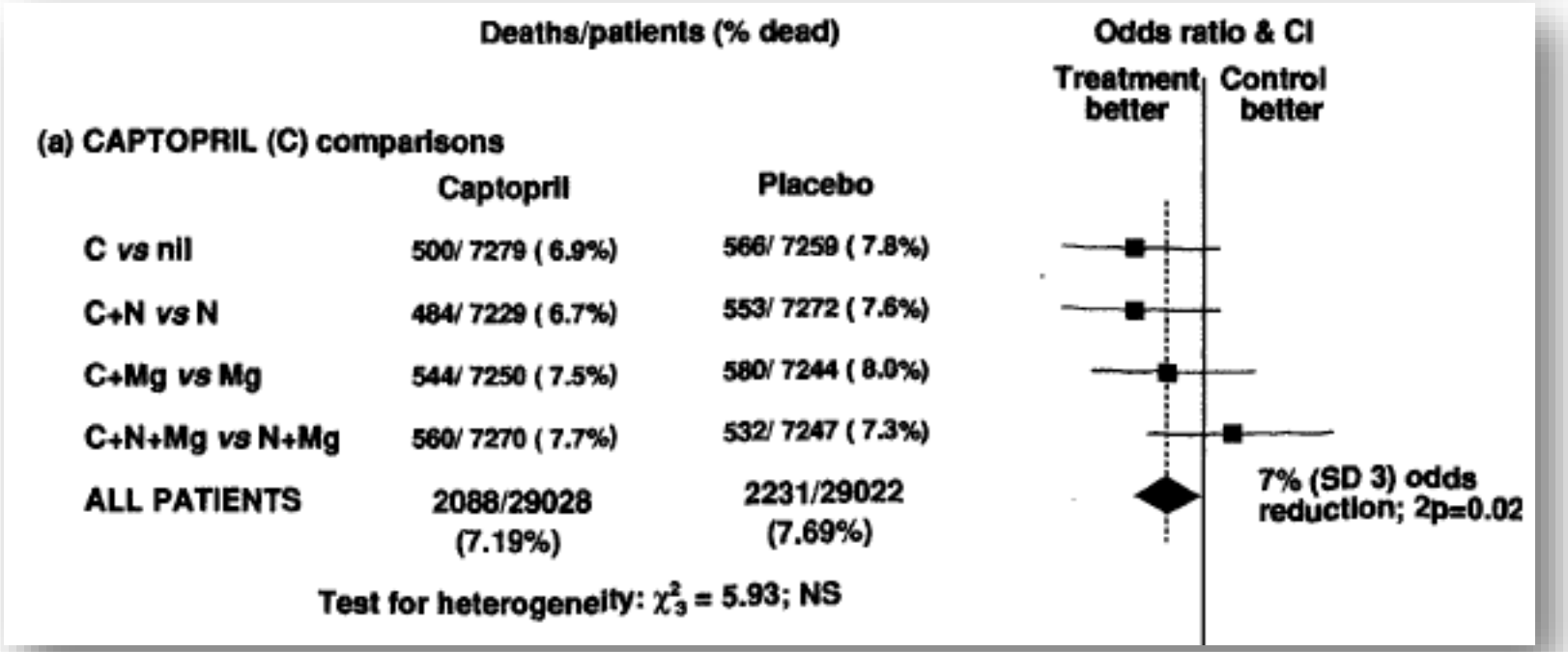
IECAS / ARA II

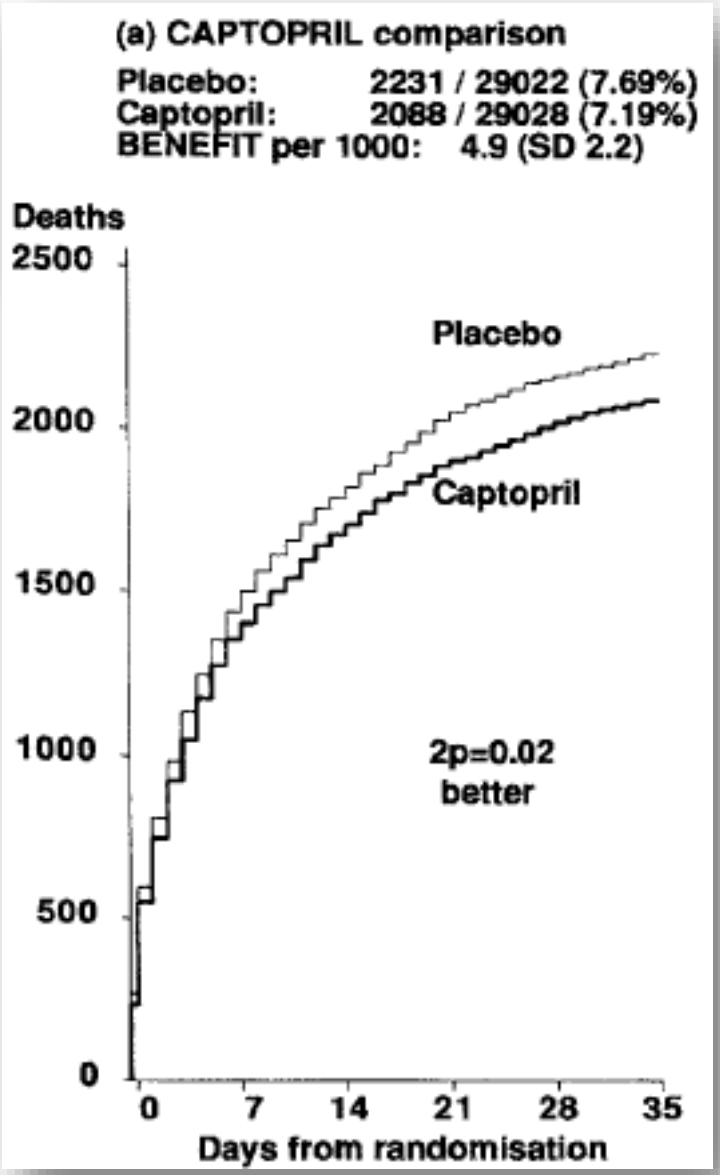
- Se recomiendan en pacientes con disfunción sistólica o falla cardiaca, hipertensión o DM y deben considerarse en todo paciente tras IAM.
- Si intolerancia a IECAS → ARA II.
- Valsartán (VALIANT) no inferior a IECA.

Ibañez B., et al. Eur Heart J. 2018 Jan 7;39(2):119-177.
Pfeffer M., et al. N Engl J Med 2003;349(20):1893–1906.

ISIS-4: A randomised factorial trial assessing early oral captopril, oral mononitrate, and intravenous magnesium sulphate in 58 050 patients with suspected acute myocardial infarction

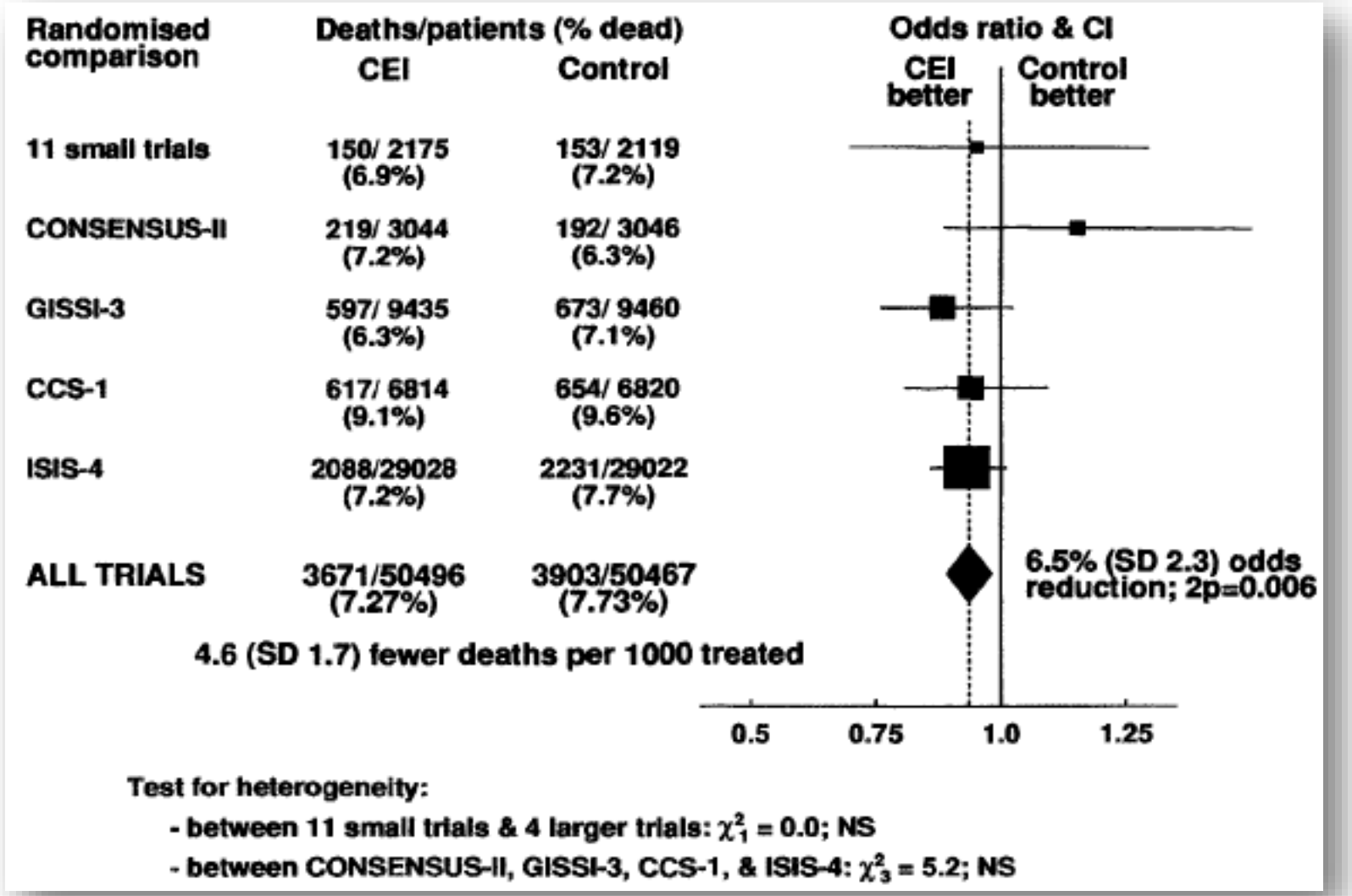
*ISIS-4 (Fourth International Study of Infarct Survival) Collaborative Group**





Reducción del 7% en la mortalidad a las 5 semanas.

ISIS-4 (Fourth International Study of Infarct Survival) Collaborative Group. Lancet 1995; 345: 669-85.



Prevención de 5 muertes por 1000 en el primer mes tras el infarto.

Mayor beneficio en pacientes de más alto riesgo.

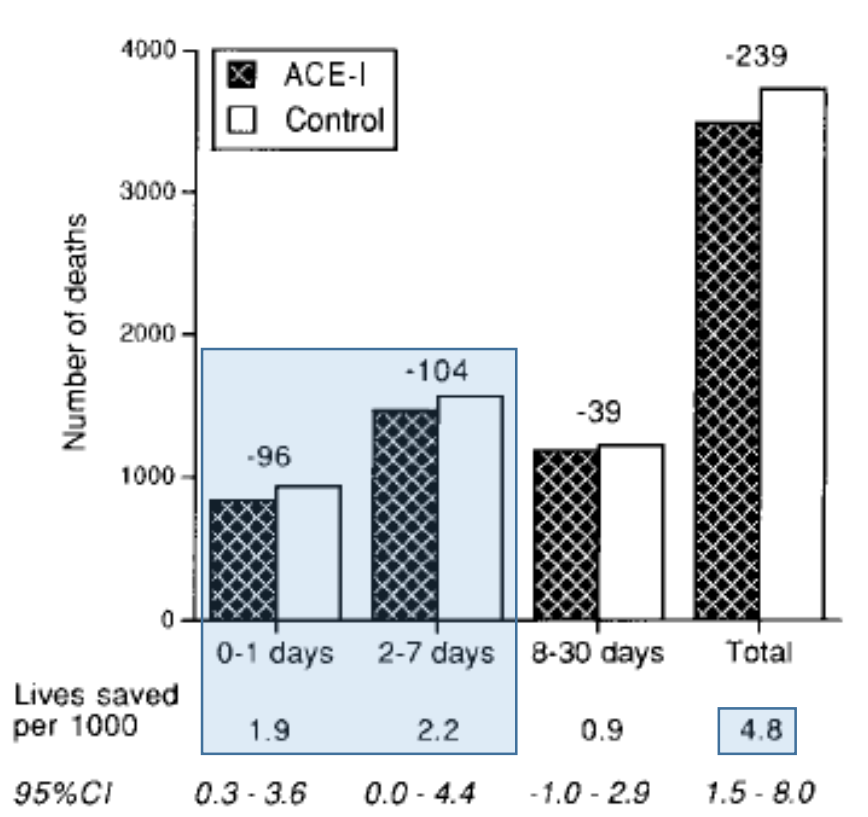
ISIS-4 (Fourth International Study of Infarct Survival) Collaborative Group. Lancet 1995; 345: 669-85.

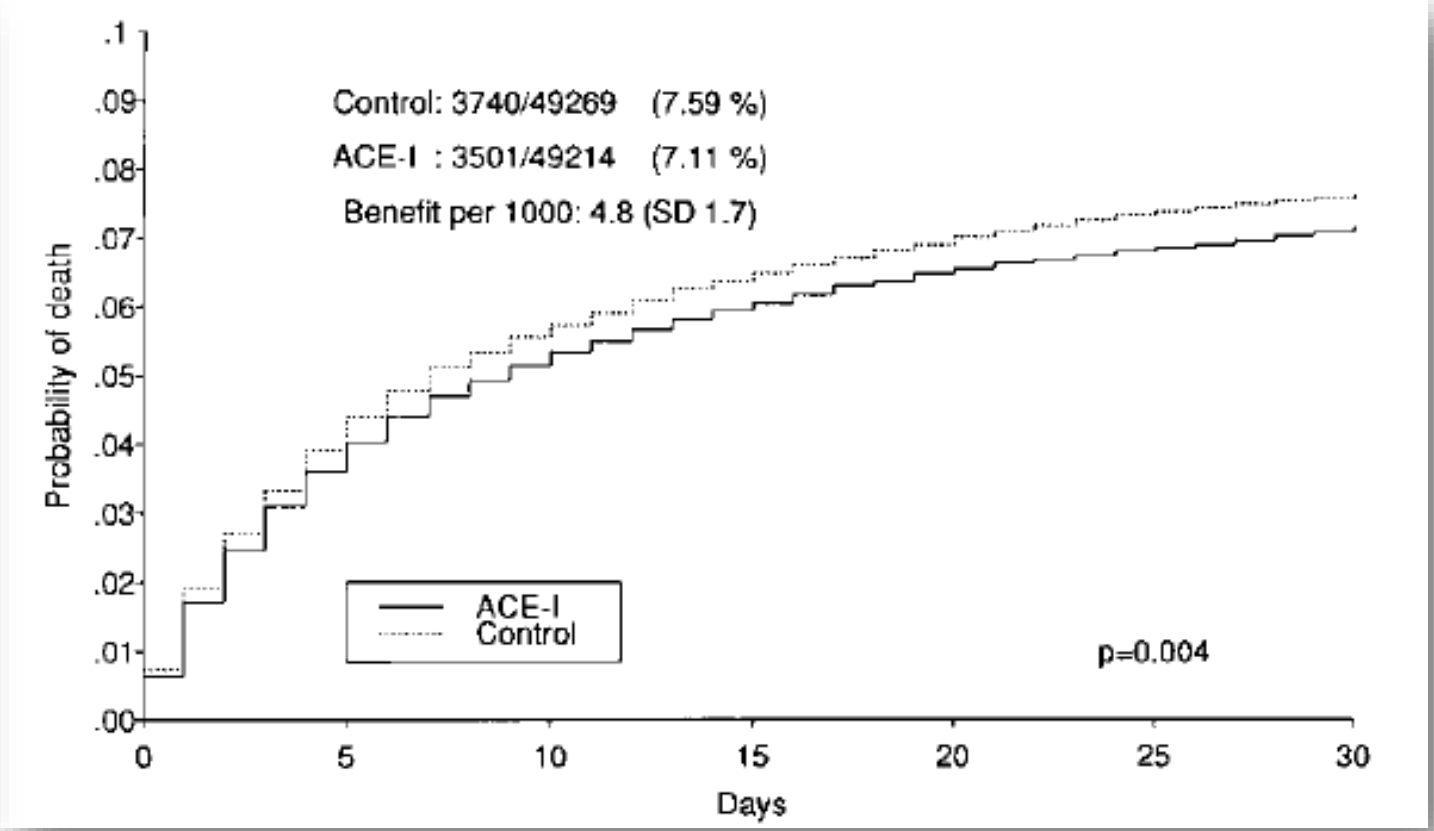
Indications for ACE Inhibitors in the Early Treatment of Acute Myocardial Infarction

Systematic Overview of Individual Data From 100 000 Patients in Randomized Trials

ACE Inhibitor Myocardial Infarction Collaborative Group*

CONSENSUS-II, GISSI-3, ISIS-4,CCS-1.





ACE Inhibitor Myocardial Infarction Collaborative Group. Circulation. 1998;97:2202-2212.

Antagonistas del receptor de mineralocorticoides/ aldosterona

- Recomendados en pacientes con disfunción del VI (FEVI < o = 40%) y falla cardiaca tras el evento.
- Espironolactona (RALES); eplerenona (EPHESUS).
- Sin falla cardiaca: ALBATROSS (espironolactona), REMINDER (eplerenona). Necesidad de más investigación.

Ibañez B., et al. Eur Heart J. 2018 Jan 7;39(2):119-177.
Pfeffer M., et al. N Engl J Med 2003;349(20):1893–1906.

Adherencia

- Baja adherencia al tratamiento es una importante barrera para alcanzar metas.

Simpson S., et al. BMJ 2006;333(7557):15.

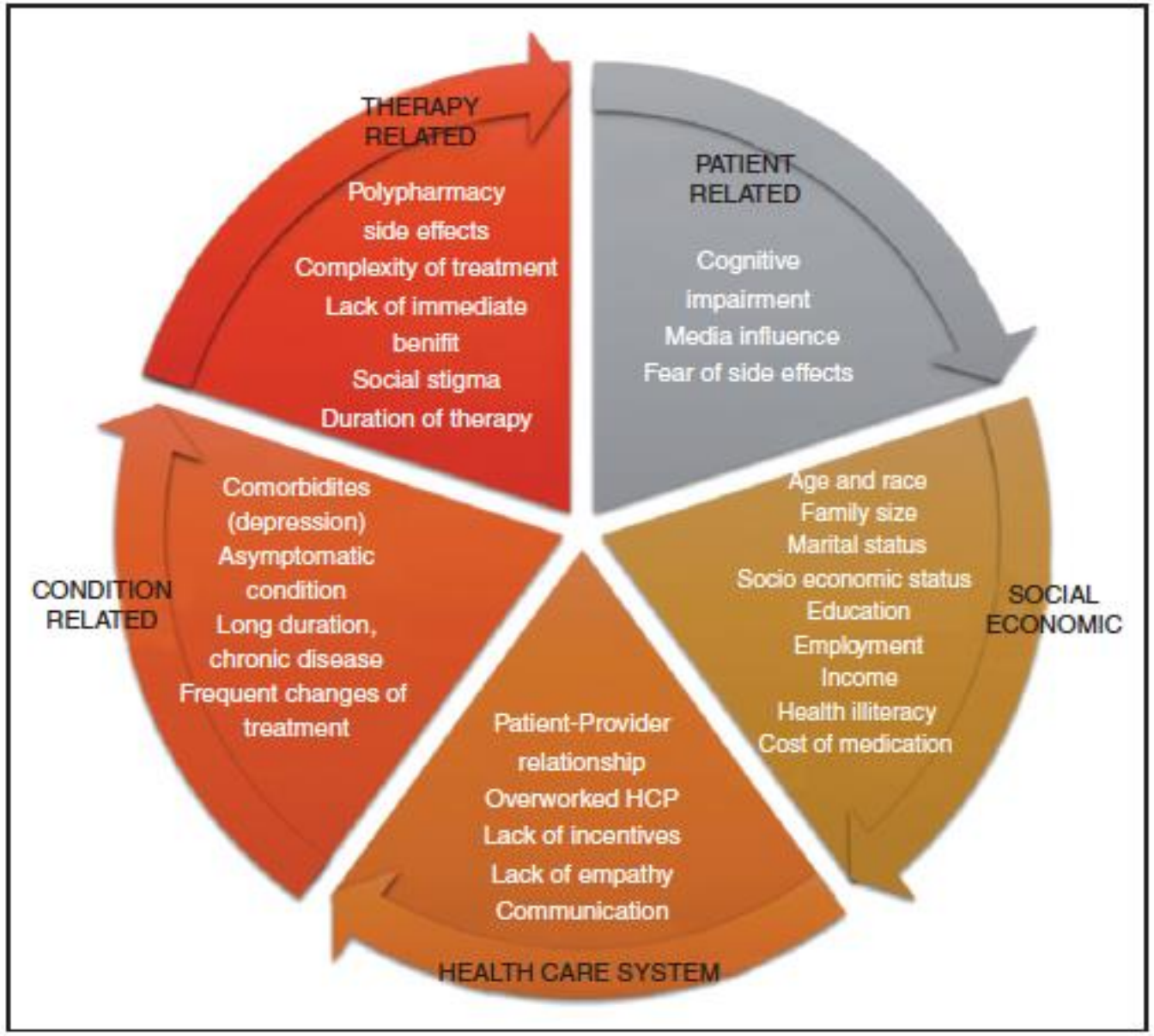
Association of Diet, Exercise, and Smoking Modification With Risk of Early Cardiovascular Events After Acute Coronary Syndromes

Adherence to Secondary Preventive Medications at 30-Day and 6-Month Follow-Up

Medication	At Discharge, n (%)	At 30 Days, n (%)	At 6 Months, n (%)
Antiplatelet	18 145 (96.5)	18 069 (96.1)	17 106 (94.7)
Statin	14 820 (78.8)	14 792 (78.0)	13 389 (90.5)
ACE/ARB	13 705 (72.9)	13 643 (72.5)	12 251 (89.8)
β-blocker	15 506 (82.4)	9100 (48.4)	7110 (78.1)

Percentage adherence compared with previous visit.

Chow C., et al. Circulation 2010;121(6):750–758.



La naturaleza multifactorial de la no-adherencia a los medicamentos.

Castellano J., et al. Eur J Prev Cardiol. 2017 Jun;24(3_suppl):44-51.

A Polypill Strategy to Improve Adherence

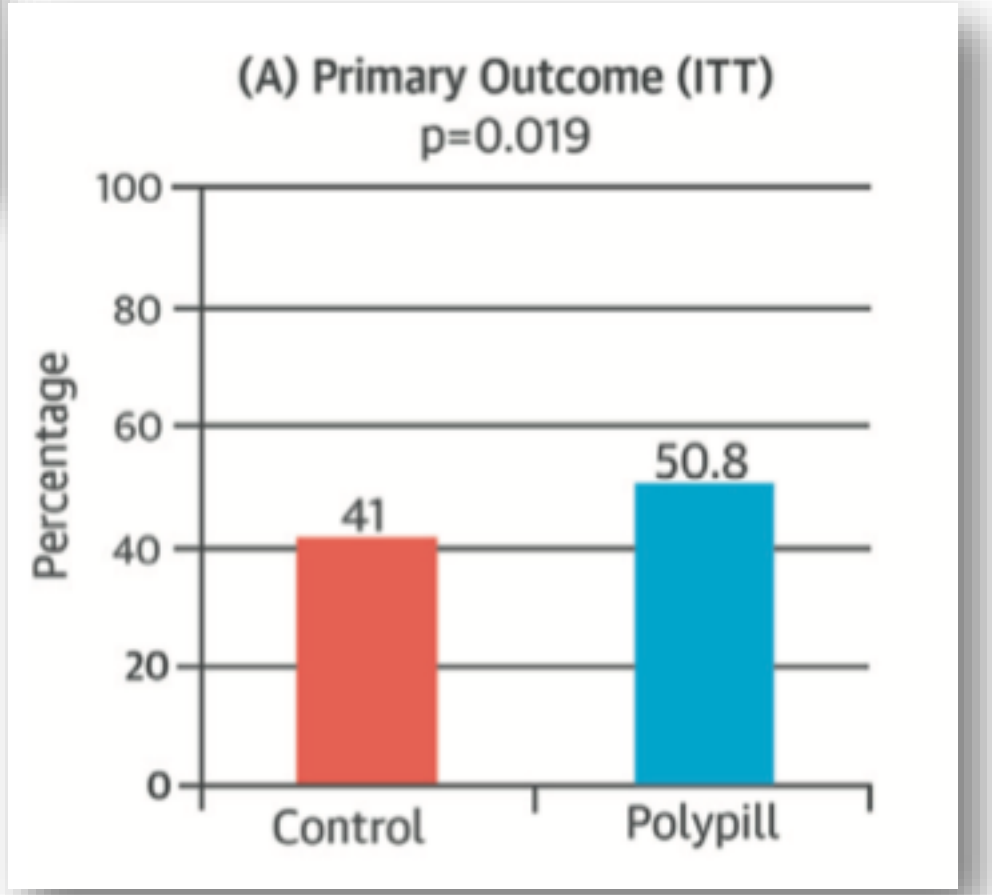
Results From the FOCUS Project

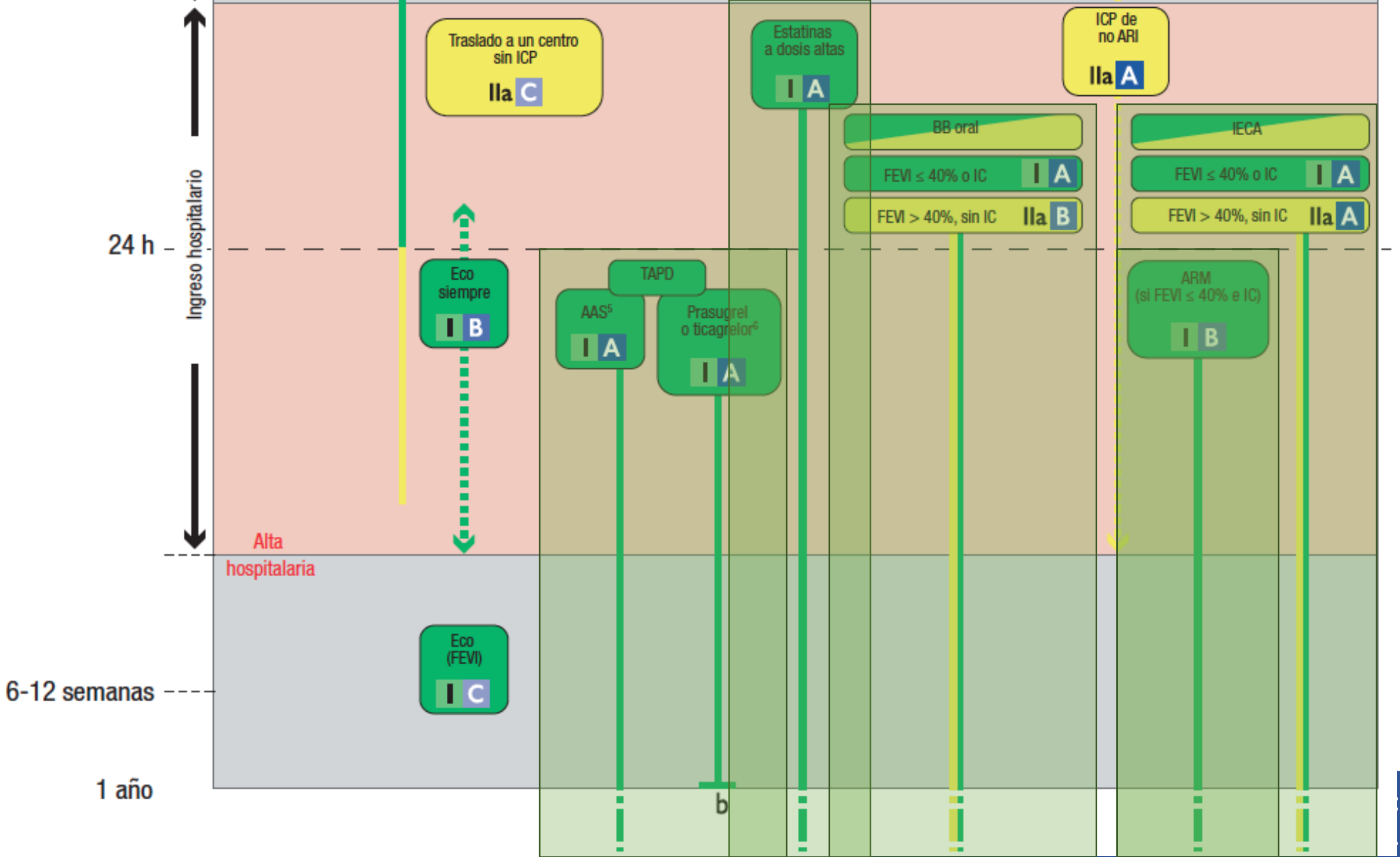
José M. Castellano, MD, PhD,*† Ginés Sanz, MD, PhD,* José L. Peñalvo, PhD,* Sameer Bansilal, MD, MS,†
Antonio Fernández-Ortiz, MD, PhD,*‡ Luz Alvarez, BSc,* Luis Guzmán, MD,§ Juan Carlos Linares, MD,§
Fernando García, MD, PhD,‖ Fabiana D'Aniello, PhD,‖ Joan Albert Arnáiz, MD, PhD,¶ Sara Varea, BSc,¶
Felipe Martínez, MD,# Alberto Lorenzatti, MD,# Iñaki Imaz, MD, PhD,** Luis M. Sánchez-Gómez, MD, MSc,**
Maria Carla Roncaglioni, Biol Sci Dr,†† Marta Baviera, PharmD,†† Sidney C. Smith, Jr, MD,‡‡
Kathryn Taubert, PhD,‡‡ Stuart Pocock, PhD,*§§ Carlos Brotons, MD, PhD,‖‖ Michael E. Farkouh, MD, MSc,¶¶
Valentin Fuster, MD, PhD*†

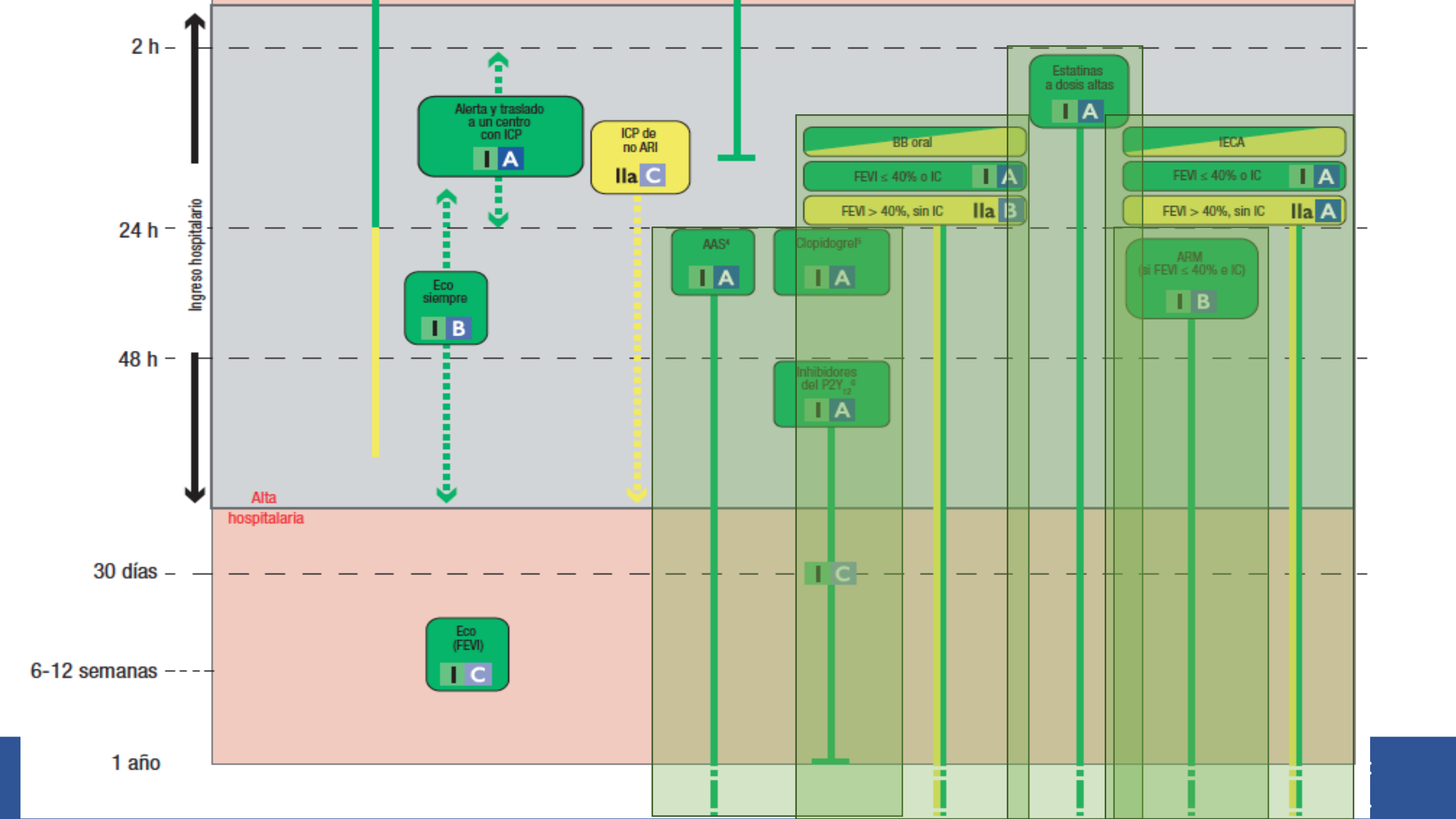
Estudio controlado; 695 pacientes post IM.

Dosis combinada fija (estatina, ASA, IECA) vs. separada, impacto sobre adherencia.

Dosis combinada fija mejor adherencia a 9 meses de seguimiento (50.8% vs. 41%, p=0.019).




Ingreso hospitalario
24 h
Alta hospitalaria
6-12 semanas
1 año
Traslado a un centro sin ICP
IIa C
Eco siempre
I B
Eco (FEVI)
I C
AAS[5]
I A
TAPD
Prasugrel o ticagrelor[6]
I A
Estatinas a dosis altas
I A
ICP de no ARI
IIa A
BB oral
FEVI ≤ 40% o IC
I A
FEVI > 40%, sin IC
IIa B
IECA
FEVI ≤ 40% o IC
I A
FEVI > 40%, sin IC
IIa A
ARM (si FEVI ≤ 40% e IC)
I B
b


2 h
24 h
48 h
30 días
6-12 semanas
1 año
Ingreso hospitalario
Alta hospitalaria
Alerta y traslado a un centro con ICP
I A
ICP de no ARI
IIa C
Eco siempre
I B
Eco (FEVI)
I C
AAS[4]
I A
Clopidogrel[5]
I A
Inhibidores del P2Y12[6]
I A
I C
BB oral
FEVI ≤ 40% o IC
I A
FEVI > 40%, sin IC
IIa B
Estatinas a dosis altas
I A
IECA
FEVI ≤ 40% o IC
I A
FEVI > 40%, sin IC
IIa A
ARM (si FEVI ≤ 40% e IC)
I B

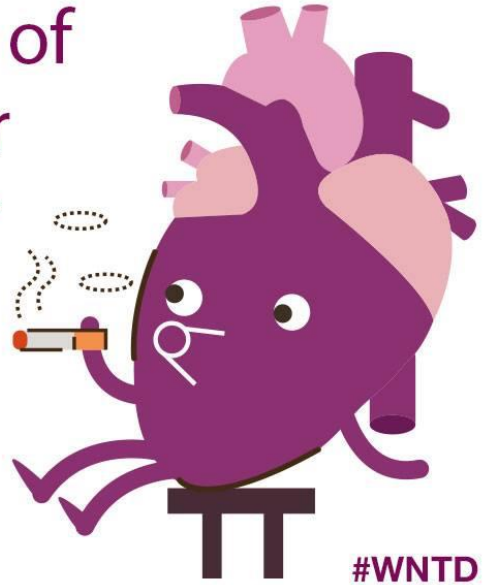
Conclusiones

- El tratamiento del SCA no termina con el egreso hospitalario del paciente.

- Se debe establecer un plan de tratamiento en conjunto con el paciente y un equipo multidisciplinario, que incluya cambios en el estilo de vida, así como terapia médica óptima (DAP, BB, IECAS/ARA II, AM), con adecuado apego a la misma.

Gracias

Tobacco use is the second leading cause of cardiovascular diseases, after high blood pressure.



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Forum of International Respiratory Societies
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