



17-20
Dicembre
2025
Napoli

70° CONGRESSO
NAZIONALE
SIGG
LIBERI E LONGEVI

Università degli
Studi di Napoli
Federico II
Polo Didattico
di **SCAMPIA**



SOCIETÀ ITALIANA
DI GERONTOLOGIA
E GERIATRIA

Management of dyslipidemia

DIMITRI RICHTER, MD, FESC, FAHA
EUROCLINIC HOSPITAL, ATENE, GRECIA

Disclosures

The presenter has received honoraria for participation in lectures and advisory boards from the following pharmaceutical and biotechnology companies:

- *Abbot*
- *AstraZeneca,*
- *Amgen*
- *Rafarm*
- *Bayer Healthcare,*
- *Boehringer Ingelheim,*
- *Novartis*
- *ELPEN,*
- *Sandoz,*
- *Lilly*
- *Medtronic,*
- *Menarini,*
- *MSD,*
- *Pfizer,*
- *Sanofi,*
- *Servier,*
- *Unifarma,*
- *Vianex.*

◆ Επισκόπηση AI

The European Society of Cardiology (ESC) **doesn't have one single definition but uses age cut-offs like ≥ 65 years, ≥ 75 years, or even ≥ 80 years in different guidelines, recognizing the population's diversity, often defining "elderly" as ≥ 75 years for specific cardiovascular recommendations where risks and data differ significantly from younger groups, while also advocating for personalized care considering frailty.**

Key Age Markers Used by ESC & Related Guidelines:

- **≥ 65 Years:** A common starting point, aligning with general population statistics and some trial data.
- **≥ 75 Years:** Frequently used as a key threshold where comorbidities and risk profiles change significantly, with some studies and guidelines (like for AFib) using this for specific screening or treatment advice.
- **≥ 80 Years:** A category for "oldest old," often with personalized targets, especially for blood pressure management, acknowledging greater vulnerability and frailty.

Why Different Ages?

- **Heterogeneity:** Older adults aren't a uniform group; a 65-year-old can be very different from an 85-year-old.
- **Data Gaps:** Clinical trial data often lacks robust information for the very old (beyond 75), necessitating specific focus.
- **Clinical Significance:** Age ≥ 75 is often where cardiovascular risk (like atrial fibrillation, stroke) sharply increases, prompting focused guidelines, notes [the National Institutes of Health \(NIH\) portal](#), citing a [SpringerLink article](#) and the National Institutes of Health (NIH) portal, and [the European Society of Cardiology \(ESC\)](#).

ELDERLY IS A PATIENT OLDER AT
LEAST 10 YEARS FROM HIS DOCTOR

2019 ESC/EAS Guidelines for the management of dyslipidaemias: lipid modification to reduce cardiovascular risk (1)

Task Force Members:

François Mach (ESC Chairperson) (Switzerland), Colin Baigent (ESC Chairperson) (United Kingdom), Alberico L. Catapano (EAS Chairperson) (Italy), Konstantinos C. Koskinas (Switzerland), Manuela Casula¹ (Italy), Lina Badimon (Spain), M. John Chapman¹ (France), Guy G. De Backer (Belgium), Victoria Delgado (Netherlands), Brian A. Ference (United Kingdom), Ian M. Graham (Ireland), Alison Halliday (United Kingdom), Ulf Landmesser (Germany), Borislava Mihaylova (United Kingdom), Terje R. Pedersen (Norway), Gabriele Riccardi¹ (Italy), Dimitrios J. Richter (Greece), Marc S. Sabatine (United States of America), Marja-Riitta Taskinen¹ (Finland), Lale Tokgozoglu¹ (Turkey), Olov Wiklund¹ (Sweden).

¹Representing the European Atherosclerosis Society (EAS)

Recommendations for the treatment of dyslipidaemias in older people (aged >65 years)

Recommendations	Class	Level
Treatment with statins is recommended for older people with ASCVD in the same way as for younger patients.	I	A
Treatment with statins is recommended for primary prevention, according to level of risk, in older people aged ≤ 75 .	I	A
Initiation of statin treatment for primary prevention in older people aged > 75 may be considered, if at high risk or above.	IIb	B
It is recommended that the statin is started at a low dose if there is significant renal impairment and/or the potential for drug interactions, and then titrated upwards to achieve LDL-C treatment goals.	I	C

©ESC

SCORE2 & SCORE2-OP
10-year risk of (fatal and non-fatal) CV events in populations at moderate CVD risk



Women

Men

Non-smoking

Smoking

Non-smoking

Smoking

Systolic blood pressure (mmHg)
SCORE2-OP

Non-HDL cholesterol

3.0-3.9
4.0-4.9
5.0-5.9
6.0-6.9

3.0-3.9
4.0-4.9
5.0-5.9
6.0-6.9

mmol/L
mg/dL

3.0-3.9
4.0-4.9
5.0-5.9
6.0-6.9

3.0-3.9
4.0-4.9
5.0-5.9
6.0-6.9

160-179

150

200

250

37

39

40

42

41

43

44

46

Age (y)

85-89

37

45

53

62

37

45

53

61

140-159

35

36

38

39

39

40

42

43

36

43

51

59

35

43

51

59

120-139

32

34

35

37

36

38

39

41

34

41

49

57

34

41

48

57

100-119

30

32

33

34

34

35

37

38

32

39

47

55

32

39

46

55

160-179

27

28

30

31

34

35

37

39

30

35

41

47

34

40

46

53

140-159

24

25

27

28

30

32

33

35

27

32

37

43

31

36

42

48

120-139

21

22

24

25

27

28

30

31

25

29

34

40

28

33

38

44

100-119

19

20

21

22

24

25

27

28

22

26

31

36

25

30

35

40

160-179

19

20

21

23

27

29

30

32

24

27

31

35

31

35

39

44

140-159

16

17

18

19

24

25

26

28

21

23

27

30

27

30

34

38

120-139

14

15

15

16

20

21

22

24

17

20

23

26

23

26

29

33

100-119

12

12

13

14

17

18

19

20

15

17

19

22

19

22

25

29

160-179

13

14

15

16

22

23

25

26

19

21

23

25

28

31

34

36

140-159

11

11

12

13

18

19

20

22

15

17

18

20

23

25

28

30

120-139

9

9

10

11

15

16

17

18

12

13

15

16

19

20

22

24

100-119

7

7

8

8

12

13

13

14

10

11

12

13

15

16

18

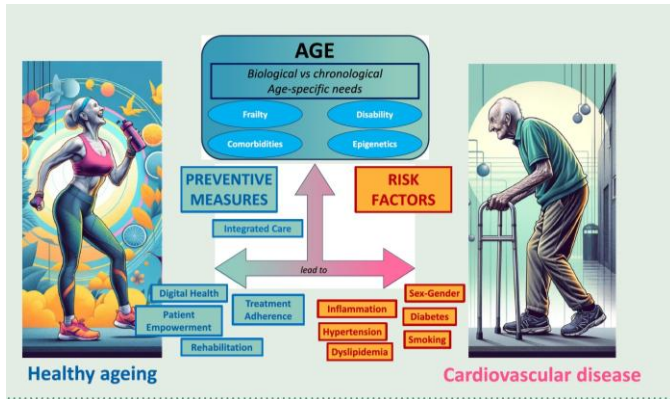
20

SCORE2 and SCORE2-OP risk chart for fatal and non-fatal (MI, stroke) ASCVD Moderate CVD Risk (1)

Cardiovascular risk factors management in older adults: a clinical consensus statement from the European Association of Preventive Cardiology of the ESC and the ESC Council for Cardiology Practice

Roberto F.E. Pedretti ^{1,2*}, Riccardo Asteggiano ^{3,4}, Andreas B. Gevaert ^{5,6}, T. Scott Bowen ⁷, Stefano Caselli ^{8,9}, Veronique A. Cornelissen ¹⁰, Ruxandra Christodorescu ^{11,12}, Giuseppe Derosa ^{13,14}, Francois Dievart ¹⁵, Donata Kurpas ¹⁶, Elena Osto ^{17,18}, Dimitri Richter ¹⁹, Anne Grete Semb ²⁰, Patrizia Steca ²¹, Luigina Guasti ^{3,22†}, and Marc Ferrini ^{23†}

Globally, defining an age threshold concerning statin prescription is highly discussed, even if statin-related adverse effects may be higher in older patients facing multimorbidity, frailty, polypharmacy, and decline in hepatic and renal functions.¹³⁰ To be noted, however, statin use was not associated with incident dementia or declines in individual cognition.¹³¹ Reduction for CVD after statin therapy was seen in patients ≥ 75 years without increasing risks of severe adverse effects. Of note, the benefits and safety of statin therapy were consistently found in adults aged ≥ 85 years.¹³² Further, discontinuation of statins resulted in increased risk of ASCVD events in older patients.^{133,134} Efficiency and safety of lipid-lowering medications need to be addressed in studies focusing on older persons.¹³⁵



In elderly patients without established ASCVD it may be reasonable to use LLT (statins) to reduce risk

- Despite potential risk of *SAMS*
- Despite potential risk of *new onset T2DM*
- Despite concerns over drug-induced *cognitive impairment*

Indications, Cautions and choices to Avoid for prescribing LLT in Elderly Patients



- Treat elderly patients with ASCVD in the same way as younger ones
- In patients ≥ 75 years without prior ASCVD, at high risk or above, it is reasonable to start a moderate-intensity statin, evaluating the opportunity of a target-guided uptritation strategy

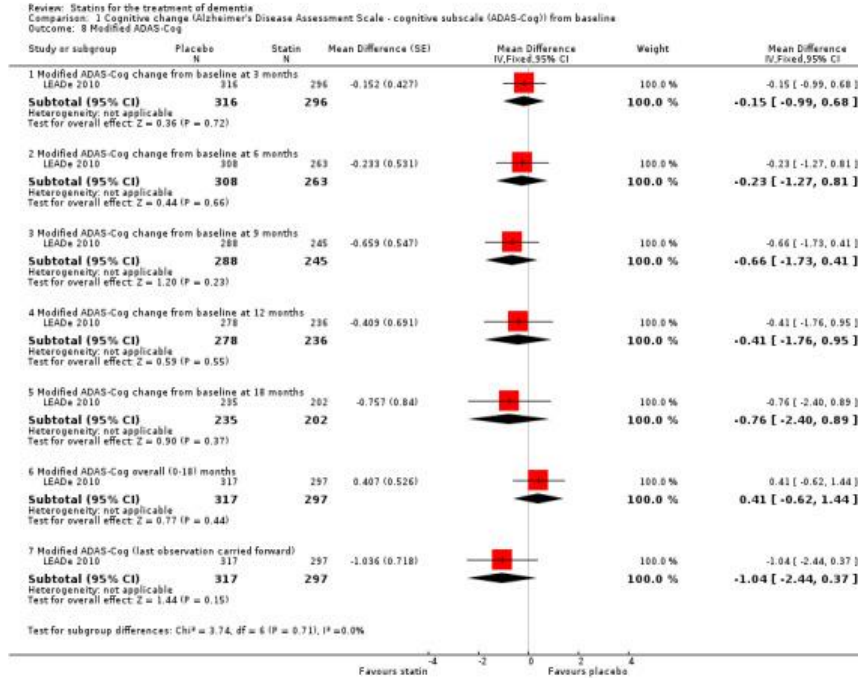


- Pay attention to potential drug-drug interactions
- Renal function impairment requires an uptritation strategy to reduce the risk for statin-related adverse events.
- In patients ≥ 75 years without prior ASCVD, CAC score evaluation has been shown to be an effective tool in reclassifying the indication for statin prescription in those patients with non-severe elevation of LDL-C (LDL-C of 70 to 189 mg/dL)
- Frailty status represents a condition underlying a high disutility risk for statin treatment, which makes it reasonable to avoid starting statin treatment.



- Statins should never be discontinued unless there is a proven risk of disutility (such as in frail patients).

Cognitive dysfunction Cochraine review



Frailty in cardiology: definition, assessment and clinical implications for general cardiology. A consensus document of the Council for Cardiology Practice (CCP), Association for Acute Cardio Vascular Care (ACVC), Association of Cardiovascular Nursing and Allied Professions (ACNAP), European Association of Preventive Cardiology (EAPC), European Heart Rhythm Association (EHRA), Council on Valvular Heart Diseases (VHD), Council on Hypertension (CHT), Council of Cardio-Oncology (CCO), Working Group (WG) Aorta and Peripheral Vascular Diseases, WG e-Cardiology, WG Thrombosis, of the European Society of Cardiology, European Primary Care Cardiology Society (EPCCS)

Dimitri Richter^{1†}, Luigina Guasti^{2*†}, David Walker³, Ekaterini Lambrinou⁴, Christos Lionis⁵, Ana Abreu^{6,7}, Irina Savelieva⁸, Stefano Fumagalli⁹, Mario Bo¹⁰, Bianca Rocca¹¹, Magnus T. Jensen¹², Luc Pierard¹³, Isabella Sudano¹⁴, Victor Aboyans¹⁵, and Riccardo Asteggiano^{2,16}

¹Euroclinic Hospital, Athens, Greece; ²Internal Medicine, Department of Medicine and Surgery, University of Insubria, ASST-settelaghi, Via Guicciardini 5, 21100 Varese, Italy;

Box 1. Definitions.

FRAILITY:

Multidimensional and multisystem condition characterized by decreased functional reserves and increased vulnerability to stress and acute adverse events.

This condition, a complex system behavior of components, can be described according to:

- peculiar genesis, including accumulation of damages and dysregulations,
- peculiar phenotype including physical, nutritional, cognitive/psychological and social aspects, and
- adverse health-related outcomes

MULTIMORBIDITY:

Concurrent presence of two or more medically diagnosed diseases in the same individual, closely related with ageing

DISABILITY:

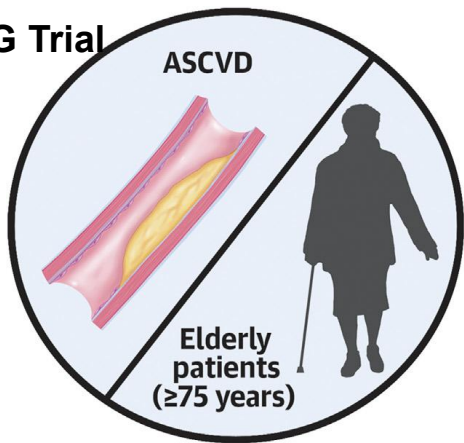
Difficulty or dependency in carrying out activities essential for daily living, including tasks needed for self-care and living independently

OVERLAPPING CONDITIONS:

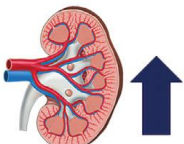
Ageing is associated with frailty, multimorbidity and disability and the three conditions are largely overlapping.

Combination Moderate-Intensity Statin and Ezetimibe Therapy for Elderly Patients With Atherosclerosis

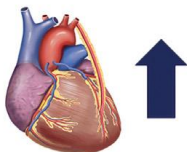
The RACING Trial



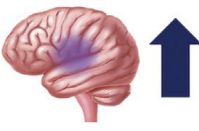
Hypertension



CKD

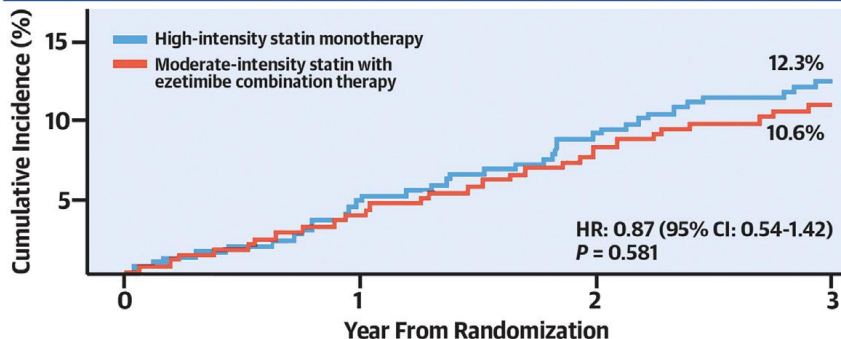


CABG

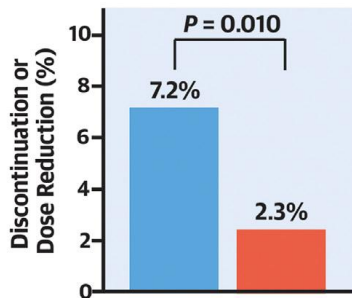


Cerebrovascular Accident

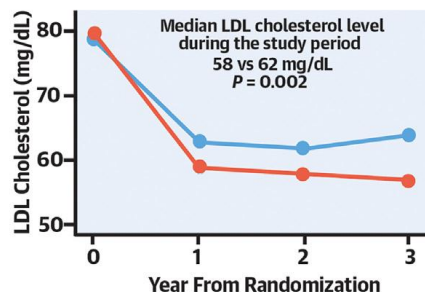
3-Year Composite Cardiovascular Events



Drug Discontinuation or Dose Reduction

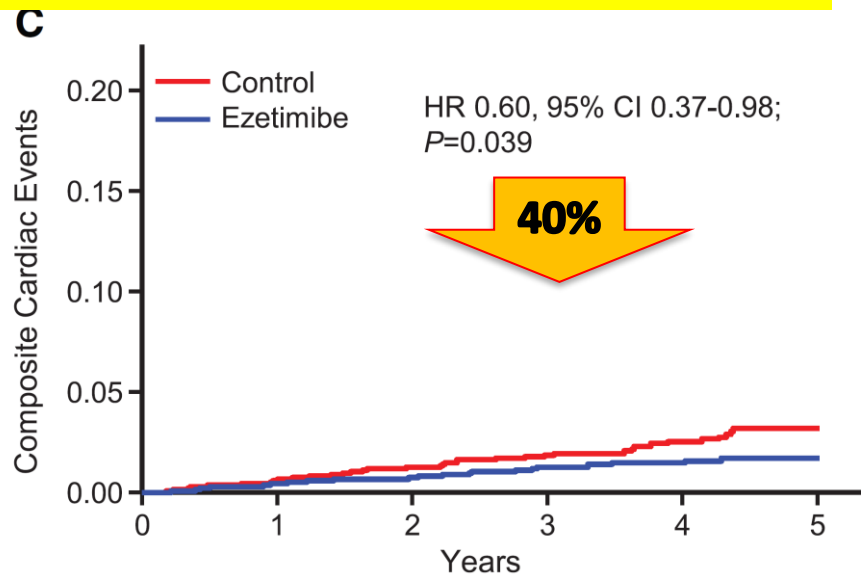
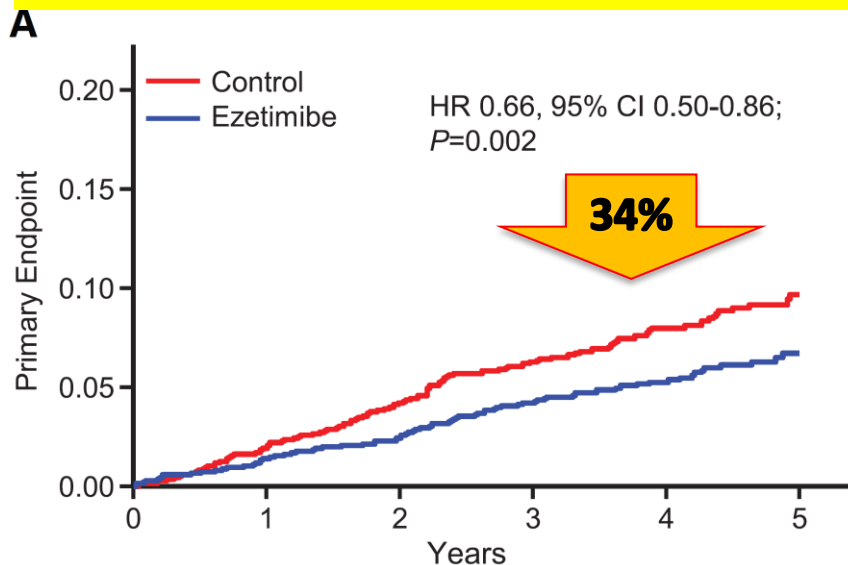


LDL Cholesterol Levels



Ezetimibe and Cardiovascular Events in the Old-Old (EWTOPIA 75)

- Multicenter, prospective, randomized, open-label, blinded end-point evaluation; 363 medical institutions in Japan
- Patients aged ≥ 75 years, with elevated LDL-C without history of CAD, $n=3796$



Primary outcome was a composite of sudden cardiac death, myocardial infarction, coronary revascularization, or stroke.



Objective

To determine whether pravastatin 40 mg will reduce coronary and cerebral events in elderly subjects with either pre-existing vascular disease or with high risk of vascular disease

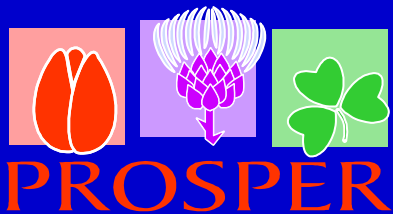
Baseline Characteristics

	Placebo	Pravastatin
Mean Age (years)	75.3	75.4
Male (%)	48	48
History of CVD (%)	43	45
Current Smoker (%)	28	26
Hypertension (%)	62	62
Mean SBP/DBP (mmHg)	155/84	155/84
Diabetes (%)	11	11



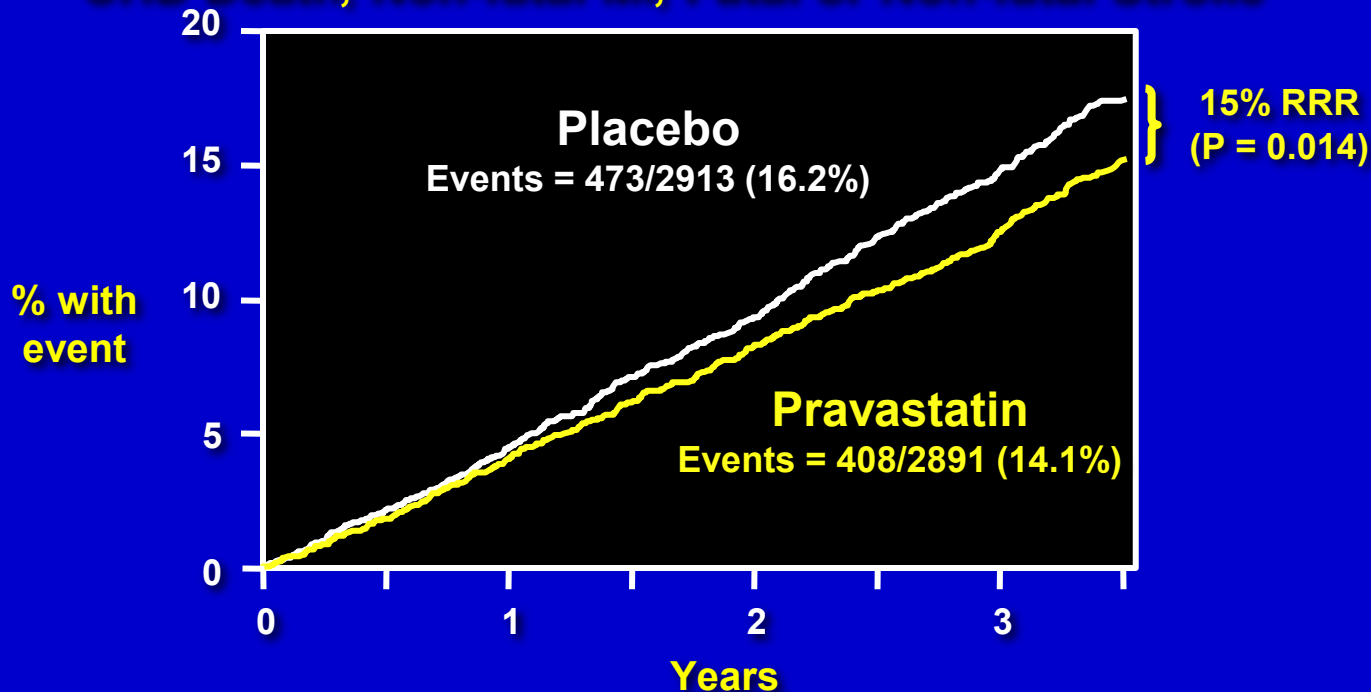
Baseline Lipids

	<u>Placebo</u> mmol/L (mg/dL)	<u>Pravastatin</u> mmol/L (mg/dL)
Total-C	5.7 (221)	5.7 (221)
LDL-C	3.8 (147)	3.8 (147)
HDL-C	1.3 (50)	1.3 (50)
Trig	1.5 (133)	1.5 (133)



Primary Endpoint

CHD Death, Non-fatal MI, Fatal or Non-fatal Stroke





Summary of Results

- Pravastatin achieved a 15% RRR ($p = 0.014$) in the primary endpoint (CHD death, non-fatal MI, fatal or non-fatal stroke) over 3.2 years of follow-up
- Pravastatin significantly reduced CHD events by 19% ($p = 0.006$)
- CHD mortality decreased by 24% ($p = 0.043$)
- No difference in cognitive function was observed

Effect of pravastatin on cardiovascular events in older patients with myocardial infarction and cholesterol levels in the average range. Results of the Cholesterol and Recurrent Events (CARE) trial

S J Lewis ¹, L A Moye, F M Sacks, D E Johnstone, G Timmis, J Mitchell, M Limacher, S Kell, S P Glasser, J Grant, B R Davis, M A Pfeffer, E Braunwald

Affiliations + expand

PMID: 9841599 DOI: 10.7326/0003-4819-129-9-199811010-00002

Design: Subset analysis of a randomized, controlled trial.

Setting: 80 hospitals and affiliates in the United States and Canada.

Patients: 1283 patients aged 65 to 75 years who had had myocardial infarction and had a plasma total cholesterol level less than 6.2 mmol/L (240 mg/dL) and a low-density lipoprotein cholesterol level of 3.0 to 4.5 mmol/L (115 to 174 mg/dL).

Intervention: Pravastatin, 40 mg/d, or placebo.

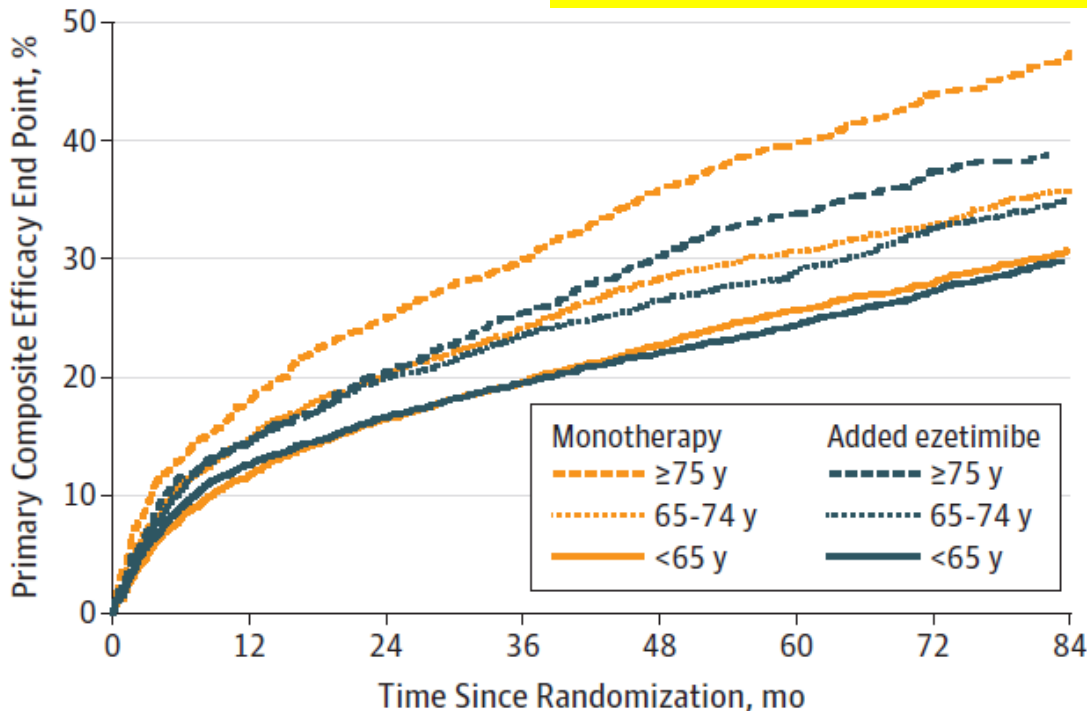
Measurements: Five-year event rates of major coronary events (coronary death, nonfatal myocardial infarction, angioplasty, or bypass surgery) and stroke.

Conclusions: Major coronary events, coronary death, and stroke were reduced by, respectively, 32, 45, and 40% in elderly patients; the number needed to treat (NNT) of older patients for 5 years was 11 in order to prevent one major coronary event and 22 to prevent one coronary death. For every 1000 older patients treated, 225 cardiovascular hospitalizations would be prevented compared with 121 hospitalizations in 1000 younger patients.

Simvastatin + Ezetimibe Among ACS Pts 75 Years Old or Older: (IMPROVE-IT)

A Primary composite efficacy end point

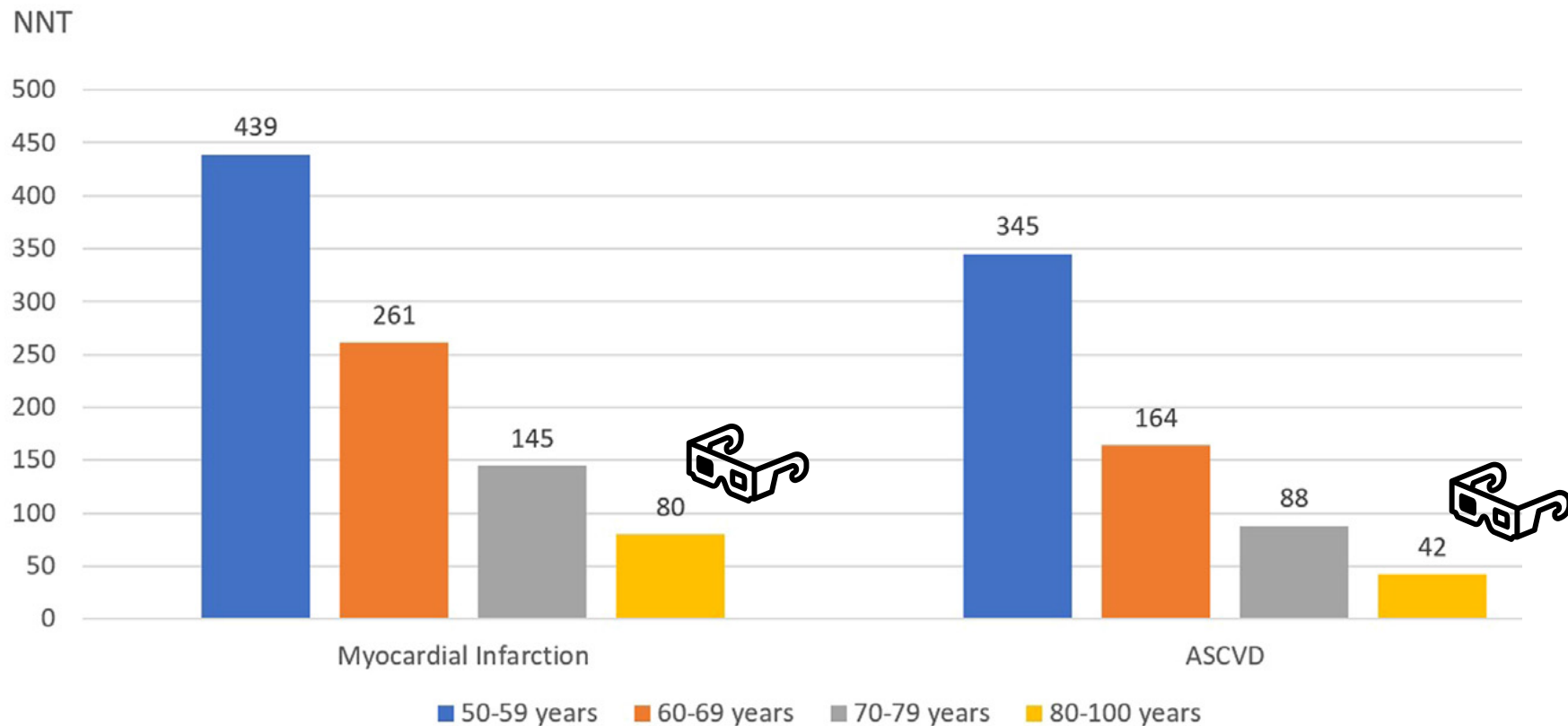
18 144 patients enrolled (men 75.7%)
5173 (28.5%) were 65 to 74 years old
2798 (15.4%) \geq 75 years
Median follow-up 6 years



RRR
20%

ARR
8.7%

Number needed to treat for primary prevention of MI and ASCVD by age

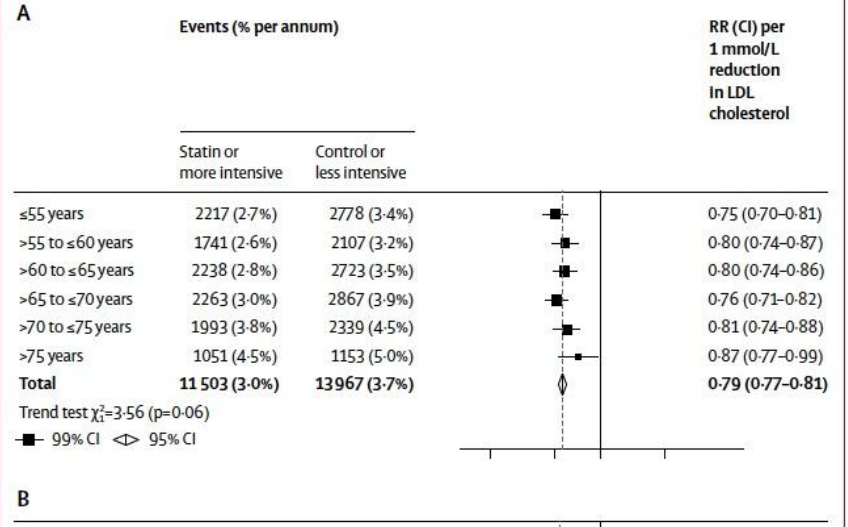


Efficacy and safety of statin therapy in older people: a meta-analysis of individual participant data from 28 randomised controlled trials

Cholesterol Treatment Trialists' Collaboration*



Interpretation Statin therapy produces significant reductions in major vascular events irrespective of age, but there is less direct evidence of benefit among patients older than 75 years who do not already have evidence of occlusive vascular disease. This limitation is now being addressed by further trials.



FUTURE STUDIES



Active, not recruiting ⓘ

A Clinical Trial of STAtin Therapy for Reducing Events in the Elderly (STAREE) (STAREE)

ClinicalTrials.gov ID ⓘ NCT02099123

Sponsor ⓘ Monash University

Information provided by ⓘ Sophia Zoungas, Monash University (Responsible Party)

Last Update Posted ⓘ 2024-11-21

- primary prevention in 18,000 older patients (≥ 70 years)
- randomly assigned to receive atorvastatin 40 mg/d or placebo

Recruiting 

Pragmatic Evaluation of Events And Benefits of Lipid-lowering in Older Adults (PREVENTABLE)

ClinicalTrials.gov ID  NCT04262206

Sponsor  Duke University

Information provided by  Duke University (Responsible Party)

Last Update Posted  2025-06-26

- 20,000 community-dwelling primary prevention patients age ≥ 75 years
- randomly assigned to receive atorvastatin 40 mg/d or placebo

Completed 

Statins In The Elderly (SITE)

ClinicalTrials.gov ID  NCT02547883

Sponsor  University Hospital, Bordeaux

Information provided by  University Hospital, Bordeaux (Responsible Party)

Last Update Posted  2023-02-24

To evaluate cost/effectiveness ratio, in real life, of statin cessation in people ≥ 75 yrs treated in primary prevention