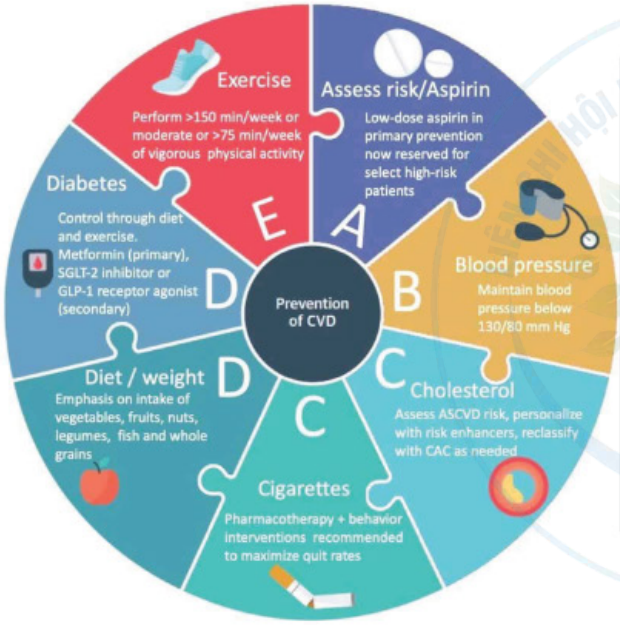
Mức LDL-C nào cho bệnh nhân bệnh tim mạch do xơ vữa ?

TS. BS. TRẦN HÒA
ĐHYD TP. HCM
Tổng thư ký Phân hội XVĐM Việt Nam

HỘI NGHỊ KHOA HỌC THƯỜNG NIÊN 2023
CẬP NHẬT CHẨN ĐOÁN & ĐIỀU TRỊ BỆNH LÝ NGƯỜI CAO TUỔI
14 - 15 - 16.04.2023 | KHÁCH SẠN NALOD - ĐÀ NẴNG

DỰ PHÒNG BỆNH TIM MẠCH DO XƠ VỮA (ASCVD)



People with any of the following:

Documented ASCVD, either clinical or unequivocal on imaging.

Documented ASCVD includes previous ACS (MI or unstable angina), stable angina, coronary revascularisation (PCI, CABG and other arterial revascularization procedures), stroke and TIA, and peripheral arterial disease. Unequivocally documented ASCVD on imaging includes those findings that are known to be predictive of clinical events, such as significant plaque on coronary angiography or CT scan (multivessel coronary disease with two major epicardial arteries having >50% stenosis) or on carotid ultrasound.

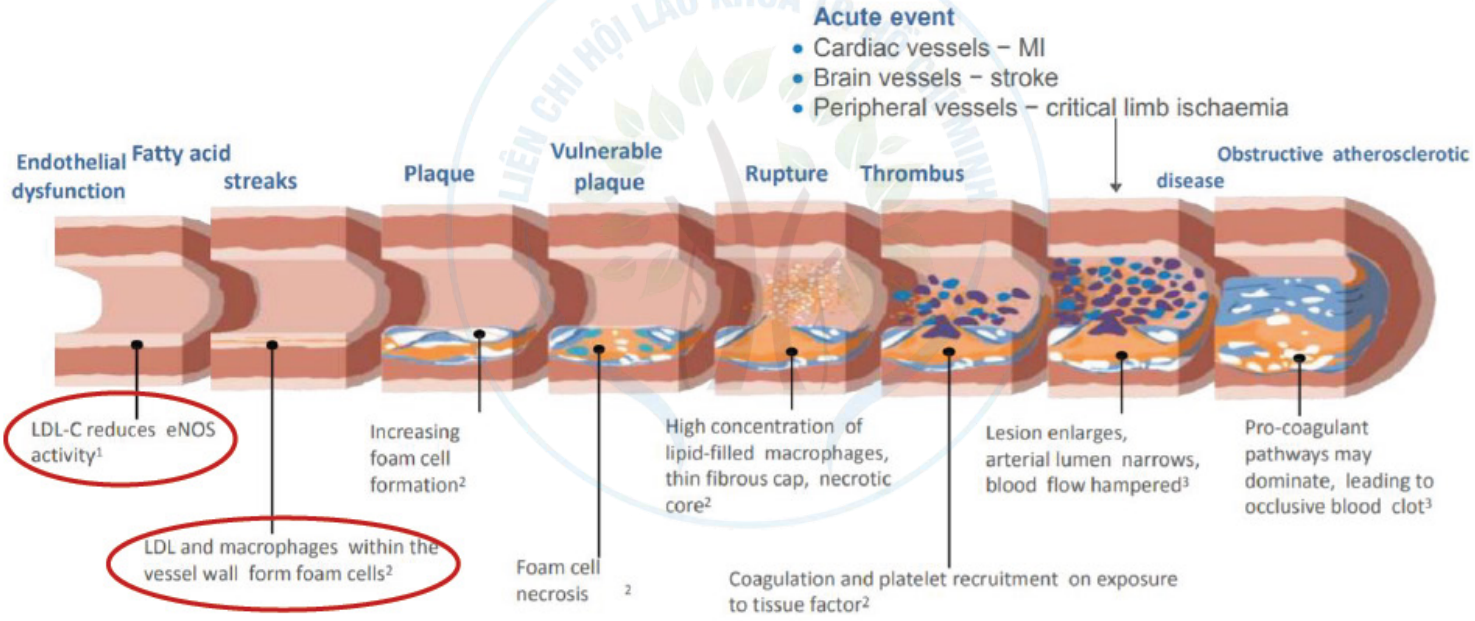
DM with target organ damage, or at least three major risk factors, or early onset of T1DM of long duration (>20 years).

(>20 years).Severe CKD (eGFR <30 mL/min/1.73m^2).

A calculated SCORE ≥10% for 10-year risk of fatal CVD.

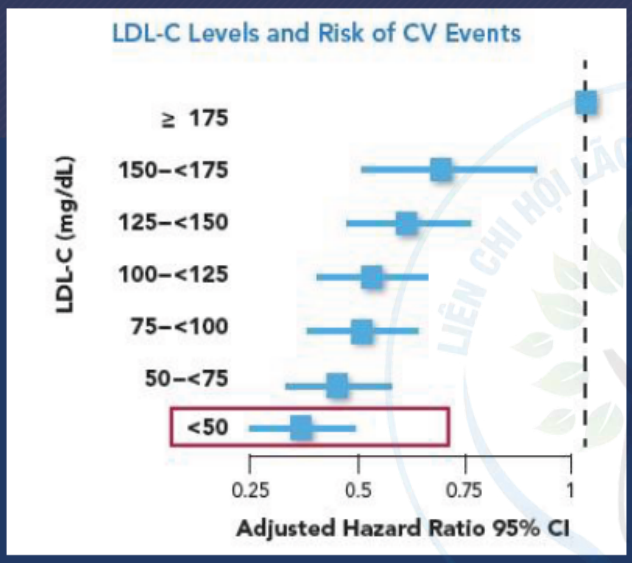
FH with ASCVD or with another major risk factor.

LDL-C là nguyên nhân chính dẫn đến sự hình thành MXV từ rất sớm và tiến triển liên tục thầm lặng

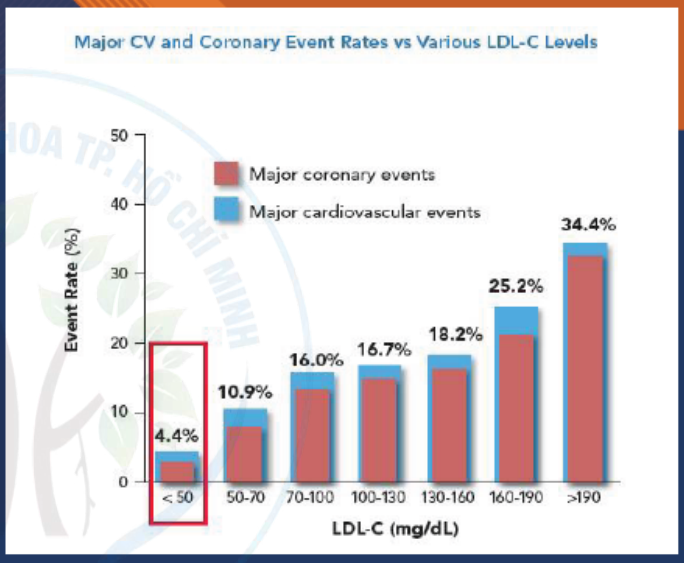


Mức LDL-C cần giảm đến bao nhiêu ở các mức nguy cơ?

HỘI NGHỊ KHOA HỌC THƯỜNG NIÊN 2023
CẬP NHẬT CHẨN ĐOÁN & ĐIỀU TRỊ BỆNH LÝ NGƯỜI CAO TUỔI
14 - 15 - 16.04.2023 | KHÁCH SẠN NALOD - ĐÀ NẴNG

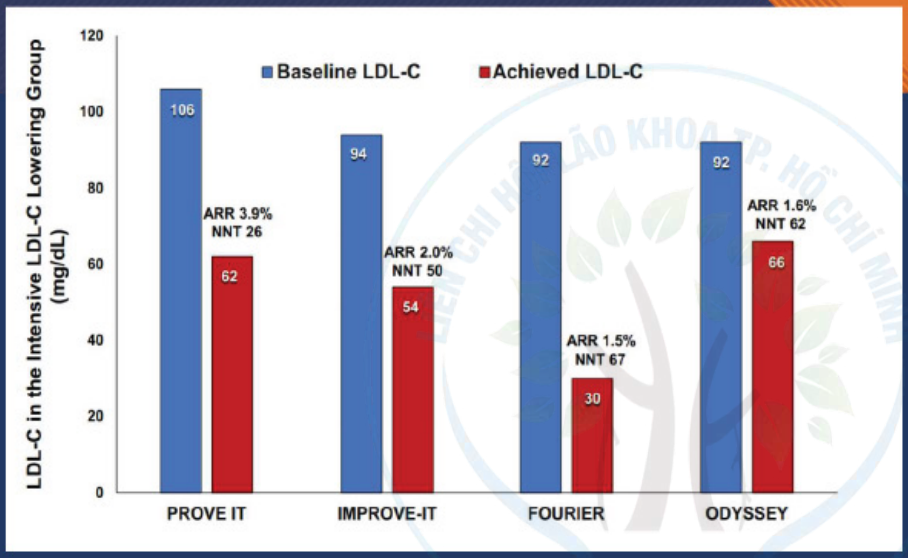


Giảm biến cố tim mạch chính khi giảm được mức LDL-C với statin



➔ Không có ngưỡng rõ ràng mà tại đó giảm LDL-C không liên quan đến giảm nguy cơ

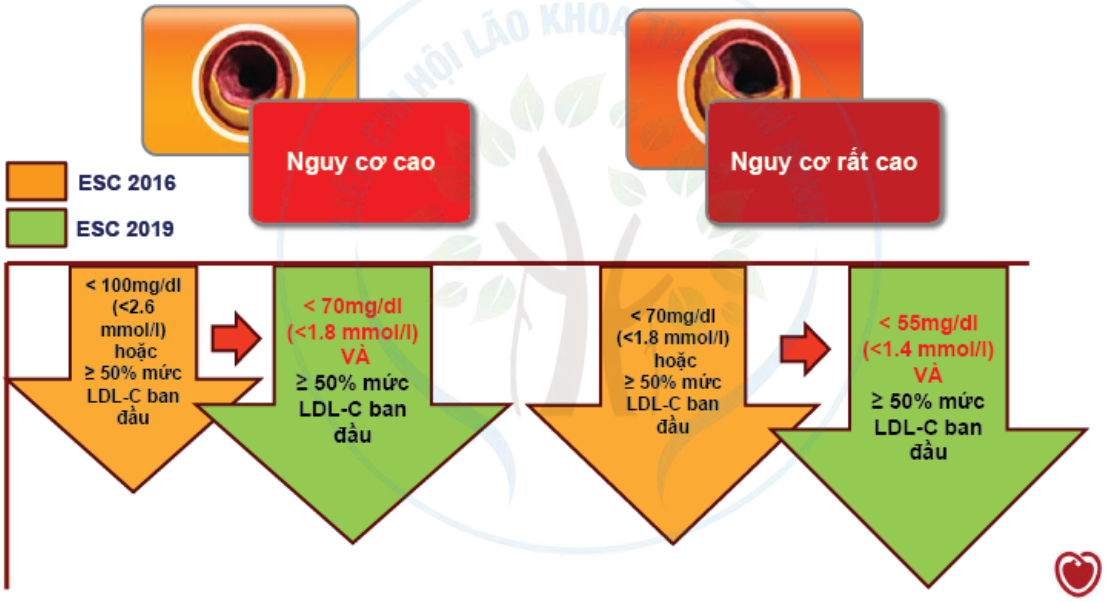
J Am Coll Cardiol 2014;64:485–94.



Giảm tích cực LDL-C ở BN nguy cơ rất cao: Càng thấp càng tốt

Current Cardiology Reports (2019) 21:77

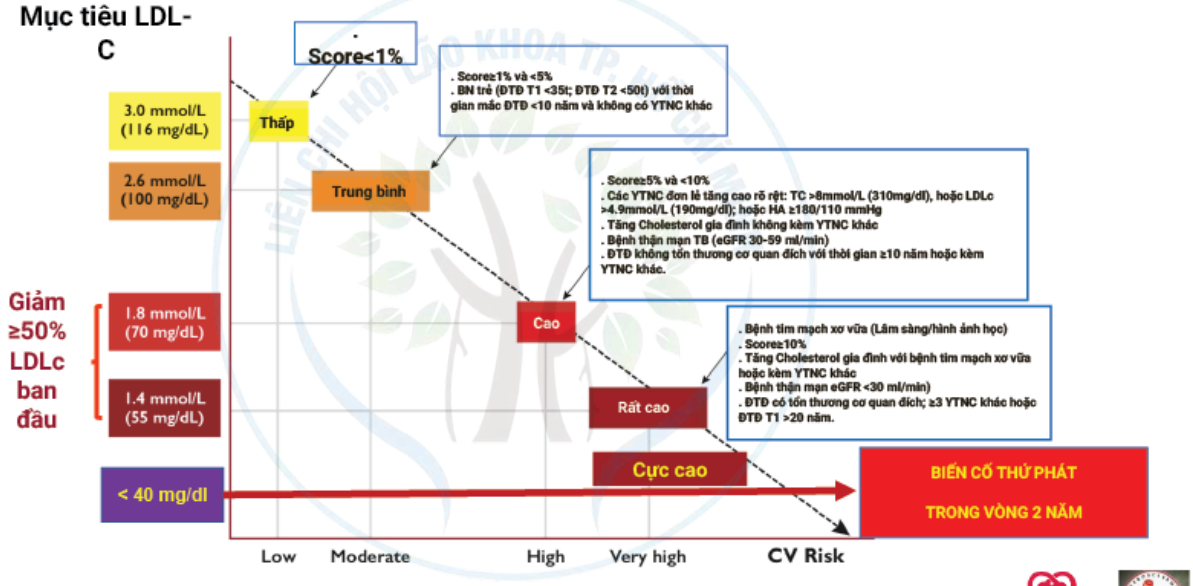
Mục tiêu LDL-c ngày càng chặt chẽ hơn
theo phân tầng nguy cơ tim mạch



ESC European Society of Cardiology

Catapano AL, et al. 2016 ESC/EAS guidelines for the management of dyslipidemia. European Heart Journal, doi:10.1093/eurheart/ehw272
European Heart Journal (2019) 00, 1-78 doi:10.1093/eurheartj/ehz455

Kiểm soát LDL-C mục tiêu đủ theo khuyến cáo điều trị



European Heart Journal (2019) 00, 1-78 doi:10.1093/eurheartj/ehz455

Table 2 Trial evidence supporting early and strong LDL-c reduction

Name	Design	Study population	Follow-up	Primary outcome	Primary results	Laboratory results
MIRACL[38]	Atorvastatin (80 mg) 1x/day vs. placebo initiated within the first 4 days after ACS (median 2.6 days)	Patients with unstable angina or non-Q-wave MI without planned revascularization $n = 3\,086$	16 weeks	Composite endpoint: death, non-fatal MI, cardiac arrest, recurrent unstable angina requiring rehospitalization	HR: 0.84 (0.70–1.00) $P = 0.048$	LDL-C: 72 mg/dL vs. 135 mg/dL
PROVE-IT TIMI-22[26]	Atorvastatin (80 mg) 1x/day vs. pravastatin (40 mg) 1x/day initiated within the first 10 days after ACS	ACS (AMI and unstable angina) $n = 4\,162$	Median of 24 months	Time to composite endpoint: Death, MI, stroke, unstable angina requiring hospitalization, any revascularization (PCI; CABG) beyond 1 month	HR: 0.84 (0.74–0.95) $P = 0.005$	LDL-C: 62 mg/dL vs 95 mg/dl
IMPROVE-IT[40]	Ezetimibe 10 mg & simvastatin (40 mg) 1x/day vs. Placebo & simvastatin (40 mg) 1x/day Randomization at a median of 5 days after index event	ACS $n = 18\,144$	Median 6 years	Composite endpoint: Death, non-fatal stroke or major coronary event (non-fatal MI, unstable angina requiring hospitalization or any revascularization beyond 1 month)	HR 0.94 (0.89–0.99) $P = 0.016$	LDL-C: 53.7 mg/dL vs. 69.5 mg/dL
ODYSSEY OUTCOMES[41]	Alirocumab & standard treatment vs. placebo & standard treatment Randomization at a median of 2.6 months after ACS	ACS $n = 18\,924$	Median 2.8 years	Composite endpoint: Death from coronary heart disease, non-fatal MI, all stroke, unstable angina requiring hospitalization	HR 0.85 (0.78–0.93) $P < 0.001$	LDL-C: 53 mg/dL vs. 92 mg/dL (at 48 months [illegible])

Primary outcomes given as hazard ratio (95% confidence interval)
ACS, acute coronary syndrome; MI, myocardial infarction; HR, hazard ratio; LDL-C, low-density lipoprotein cholesterol; IVUS, intravascular ultrasound; AMI, acute myocardial infarction;

NICE 2022 : LICENSED STATINS IN THE UK

Statin dose mg/day	5	10	20	40	80
Fluvastatin			21%	27%	33%
Pravastatin		20%	25%	29%	
Simvastatin		27%	32%	37%	42%
Atorvastatin		37%	43%	49%	55%
Rosuvastatin	38%	43%	48%	**53%**	

Low-intensity statin therapy (light blue) achieves an LDL-c reduction of 20–30%, medium-intensity statin therapy (pink) achieves an LDL-c reduction of 31–40%, high intensity statin therapy (green) achieves an LDL-c reduction above 40%. Simvastatin 80 mg (black) is not recommended due to risk of muscle toxicity. LDL-c, low-density lipoprotein cholesterol.

NICE 2022, Cegla J. Heart 2022;0:1–7. doi:10.1136/heartjnl-2022-321414

Efficacy of High-Dose Atorvastatin Loading Before Primary Percutaneous Coronary Intervention in ST-Segment Elevation Myocardial Infarction

The STATIN STEMI Trial

Objectives This study sought to determine the efficacy of high-dose atorvastatin in patients with ST-segment elevation myocardial infarction (STEMI) undergoing primary percutaneous coronary intervention (PCI).

Conclusions High-dose atorvastatin pre-treatment before PCI did not show a significant reduction of MACEs compared with low-dose atorvastatin but did show improved immediate coronary flow after primary PCI. High-dose atorvastatin may produce an optimal result for STEMI patients undergoing PCI by improving microvascular myocardial perfusion. (Efficacy of High-Dose AtorvaSTATIN Loading Before Primary Percutaneous Coronary Intervention in ST-Elevation Myocardial Infarction [STATIN STEMI]; NCT00808717). (J Am Coll Cardiol Intv 2010;3:332–9) © 2010 by the American College of Cardiology Foundation

count was lower in the 80-mg atorvastatin arm (26.9 ± 12.5 vs. 34.1 ± 19.0, p = 0.01). Myocardial blush grade and ST-segment resolution were also higher in the 80-mg atorvastatin arm (2.2 ± 0.8 vs. 1.9 ± 0.8, p = 0.02 and 61.8 ± 26.2 vs. 50.6 ± 25.8%, p = 0.01).

Conclusions High-dose atorvastatin pre-treatment before PCI did not show a significant reduction of MACEs compared with low-dose atorvastatin but did show improved immediate coronary flow after primary PCI. High-dose atorvastatin may produce an optimal result for STEMI patients undergoing PCI by improving microvascular myocardial perfusion. (Efficacy of High-Dose AtorvaSTATIN Loading Before Primary Percutaneous Coronary Intervention in ST-Elevation Myocardial Infarction [STATIN STEMI]; NCT00808717). (J Am Coll Cardiol Intv 2010;3:332–9) © 2010 by the American College of Cardiology Foundation

STATIN STEMI= Efficacy of High-Dose AtorvaSTATIN Loading Before Primary Percutaneous Coronary Intervention in ST-Elevation Myocardial Infarction, STEMI= ST-Elevation Myocardial Infarction, MACE= Major adverse cardiovascular events, MI= Myocardial infarction, PCI= Percutaneous coronary intervention

Jung-Sun Kim et al. J Am Coll Cardiol Intv 2010;3:332–9

11

Efficacy of Early Intensive *Rosuvastatin* Therapy in Patients With ST-Segment Elevation Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention (ROSEMARY Study)

Young-Guk Ko, MD[a], Hoyoun Won, MD[a], Dong-Ho Shin, MD, PhD[a], Jung-Sun Kim, MD, PhD[a], Byeong-Keuk Kim, MD, PhD[a], Donghoon Choi, MD, PhD[a], Myeong-Ki Hong, MD, PhD[a,b], Jang-Ho Bae, MD, PhD[c], Sahng Lee, MD, PhD[d], Do-Sun Lim, MD, PhD[e], and Yangsoo Jang, MD, PhD[a,b,*]

The purpose of the study was to investigate whether early high-dose potent statin therapy in patients with ST elevation myocardial infarction undergoing primary percutaneous coronary intervention can reduce infarct size compared with conventional low-dose statin therapy. In a

In conclusion, early high-dose rosuvastatin therapy in patients with ST elevation myocardial infarction undergoing primary percutaneous coronary intervention did not improve periprocedural myocardial perfusion or reduce infarct volume measured by MRI compared with the conventional low-dose rosuvastatin regimen.

characteristics were similar between the 2 groups, except hypertension, which was more prevalent in the high-dose group. Serial MRI data were available for 121 patients (high-dose group n = 54 and low-dose group n = 67). The relative infarct volumes in the acute (23.0 ± 9.5% vs 20.5 ± 11.7%, p = 0.208) and chronic (15.9 ± 8.3% vs 15.8 ± 9.7%, p = 0.943) phases were not different between the groups. No differences between groups were observed for periprocedural microvascular circulation evaluated by Thrombolysis In Myocardial Infarction flow grade, myocardial blush grade, ST-segment resolution, microvascular obstruction on cardiac MRI, or clinical outcomes. In conclusion, early high-dose rosuvastatin therapy in patients with ST elevation myocardial infarction undergoing primary percutaneous coronary intervention did not improve periprocedural myocardial perfusion or reduce infarct volume measured by MRI compared with the conventional low-dose rosuvastatin regimen.

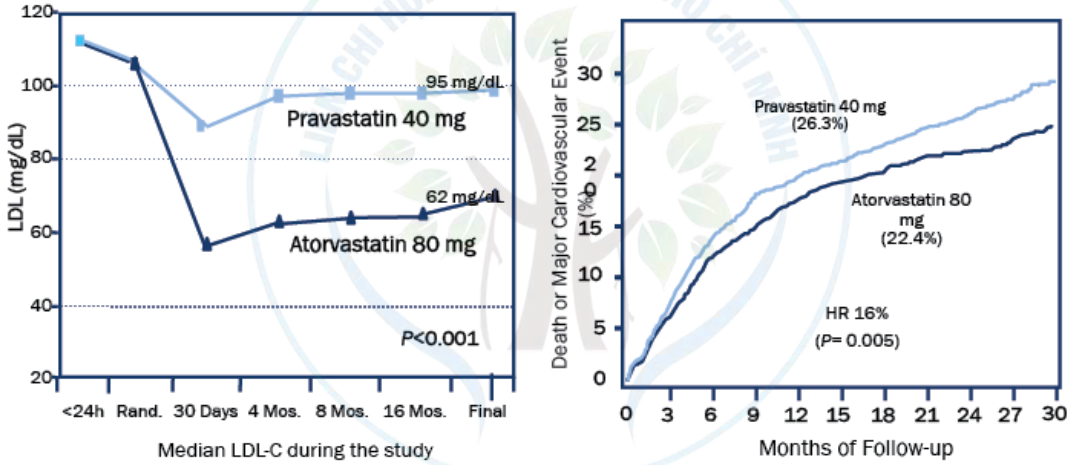
ROSEMARY= The Efficacy of Early Intensive Rosuvastatin Therapy in Patients with ST-segment Elevation Myocardial Infarction Undergoing Primary Percutaneous Coronary Intervention, MRI= Magnetic Resonance Imaging

Young-Guk Ko et al. Am J Cardiol. 2014;114:29e35

12

Intensive vs. Moderate Lipid Lowering with Statin after ACS

PROVE-IT trial: 4,162 patients with an ACS < 10 days



ACS = Acute coronary syndrome, LDL-C= Low-density lipoprotein cholesterol, PROVE-IT= Pravastatin or Atorvastatin Evaluation and Infection Therapy

Cannon CP, et al. *N Engl J Med.* 2004;350:1495-1504.

Research

JAMA | Original Investigation

Effect of Loading Dose of Atorvastatin Prior to Planned Percutaneous Coronary Intervention on Major Adverse Cardiovascular Events in Acute Coronary Syndrome
The SECURE-PCI Randomized Clinical Trial

Otavio Berwanger, MD, PhD; Eliana Vieira Santucci, RT; Pedro Gabriel Melo de Barros e Silva, MD, MHS, PhD; Isabella de Andrade Jesuíno, Pharm; Lucas Petri Damiani, MSc; Lilian Mazza Barbosa, RT; Renato Hideo Nakagawa Santos, Stat; Ligia Nasi Laranjeira, RT; Flávia de Mattos Egydio, BiolSc, MSc; Juliana Aparecida Borges de Oliveira, CN; Frederico Toledo Campo Dall Orto, MD; Pedro Beraldo de Andrade, MD, PhD; Igor Ribeiro de Castro Bienert, MD, PhD; Carlos Eduardo Bosso, MD; José Armando Mangione, MD, PhD; Carisi Anne Polanczyk, MD, PhD; Amanda Guerra de Moraes Rego Sousa, MD, PhD; Renato Abdala Karam Kalil, MD, PhD; Luciano de Moura Santos, MD; Andrei Carvalho Sposito, MD, PhD; Rafael Luiz Rech, MD, PhD; Antônio Carlos Sobral Sousa, MD, PhD; Felipe Baldissera, MD; Bruno Ramos Nascimento, MD, PhD; Roberto Rocha Corrêa Veiga Giraldez, MD, PhD; Alexandre Biasi Cavalcanti, MD, PhD; Sabrina Bernardez Pereira, MD, PhD; Luiz Alberto Mattos, MD, PhD; Luciana Vidal Armaganijan, MD, PhD; Hélio Penna Guimarães, MD, PhD; José Eduardo Moraes Rego Sousa, MD, PhD; John Hunter Alexander, MD, MHS; Christopher Bull Granger, MD; Renato Delascio Lopes, MD, MHS, PhD; for the SECURE-PCI Investigators

SECURE= Statin Evaluation in Coronary Procedures and Revascularization, PCI= Percutaneous coronary intervention

Berwanger O, et al. JAMA. 2018;319(13):1331-1340

STUDY DESIGN

4,191 Patients with age ≥ 18 years and with Acute Coronary Syndrome intended to be treated with PCI

Randomization

2,087 patients: Atorvastatin
80mg pre-procedure, followed by 80mg 24 hours after PCI

1,351 underwent PCI

ITT

Atorvastatin 40mg/day for 30 days

2,104 patients: Matching Placebo

1,359 underwent PCI

ITT

Atorvastatin 40mg/day for 30 days

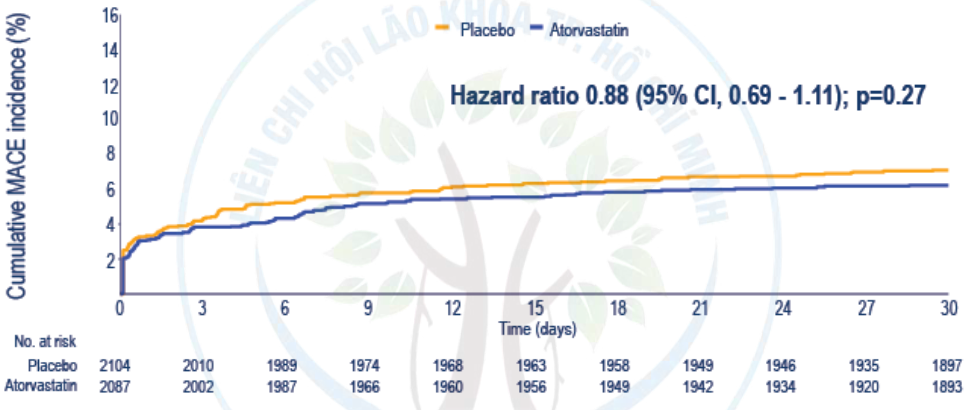
Primary outcome: Adjudicated MACE at 30 days (all-cause mortality, myocardial infarction, stroke or unplanned coronary revascularization)

Other Details: Among the 4191 patients (mean age, 61.8 [SD, 11.5] years; 4163 (99.3%) completed 30-day follow-up. A total of 2710 (**64.7%**) underwent **PCI**, 333 (**8%**) underwent **coronary artery bypass graft surgery**, and 1144 (**27.3%**) had exclusively **medical management**

PCI= Percutaneous coronary intervention, ITT= Intention to treat, MACE= Major adverse cardiovascular events, SD= Standard deviation

Berwanger O, et al. JAMA. 2018;319(13):1331-1340

CUMULATIVE INCIDENCE OF PRIMARY OUTCOME (ALL PATIENTS)



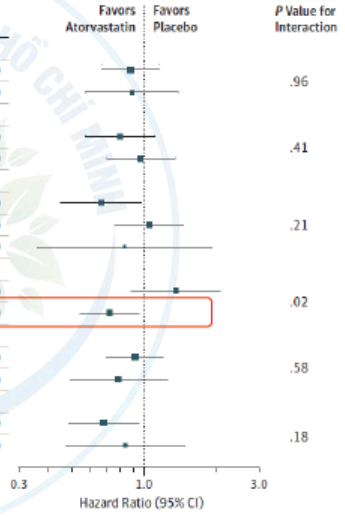
Event rates of the combined primary outcome (all-cause mortality, acute myocardial infarction, stroke, and unplanned coronary revascularization) occurrence in all patients.

CI= Confidence interval, MACE= Major adverse cardiovascular events

Berwanger O, et al. JAMA. 2018;319(13):1331-1340

SUBGROUP ANALYSIS OF THE PRIMARY OUTCOME

	No. With Primary Outcome/Total No. (%)			
	Atorvastatin (n=2087)	Placebo (n=2104)	Hazard Ratio (95% CI)	P Value for Interaction
Sex				
Male	95/1581 (5.0)	104/1525 (6.8)	0.88 (0.66-1.16)	.96
Female	35/506 (6.9)	45/579 (7.8)	0.89 (0.57-1.38)	
Age, y				
≤65	62/1320 (4.7)	77/1314 (5.9)	0.80 (0.57-1.11)	.41
>65	68/767 (8.9)	72/790 (9.1)	0.97 (0.70-1.35)	
Type of acute coronary syndrome				
STEMI	42/495 (8.5)	65/517 (12.6)	0.66 (0.45-0.98)	.21
NSTEMI	73/1241 (5.9)	69/1236 (5.6)	1.05 (0.76-1.46)	
Unstable angina	10/295 (3.4)	12/296 (4.1)	0.83 (0.36-1.93)	
Percutaneous coronary intervention				
No	49/734 (6.7)	37/743 (5.0)	1.36 (0.89-2.09)	.02
Yes	81/1351 (5.0)	112/1359 (8.2)	0.72 (0.54-0.96)	
Previous use of statin				
No	98/1477 (5.6)	109/1502 (7.3)	0.91 (0.69-1.20)	.58
Yes	32/608 (5.3)	40/600 (6.7)	0.78 (0.49-1.24)	
Type of stent[a]				
Bare-metal stent only	56/1013 (5.5)	82/1020 (8.0)	0.68 (0.48-0.95)	.18
≥1 Drug-eluting stent	21/298 (7.0)	26/312 (8.3)	0.83 (0.47-1.48)	

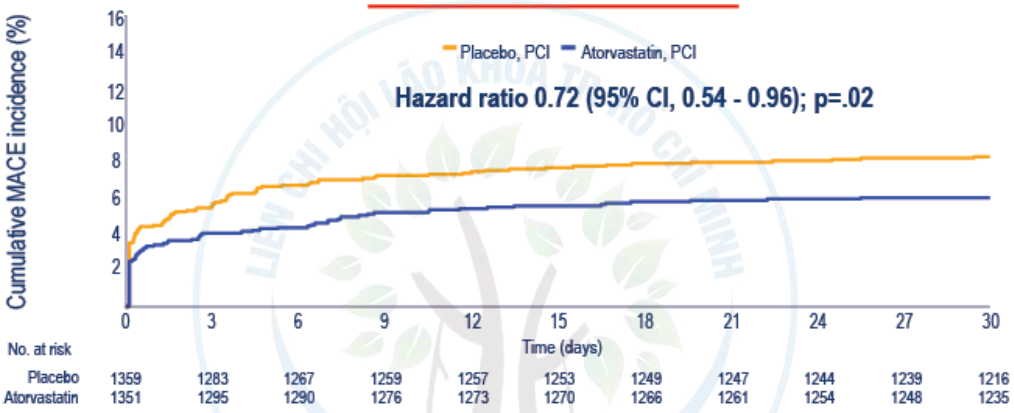


NSTEMI indicates non–ST-segment elevation myocardial infarction; STEMI, ST-segment elevation myocardial infarction. Size of the data markers indicates size of hazard ratios. *P* values were calculated by interaction parameters in the Cox regression model.

[a] Among patients undergoing PCI, 2643 (98%) received a stent.

Adapted from: Berwanger O, et al. JAMA. 2018;319(13):1331-1340

CUMULATIVE INCIDENCE OF PRIMARY OUTCOME[1] (PCI PATIENTS)



The primary outcome occurrence in patients undergoing **percutaneous coronary intervention (PCI)**

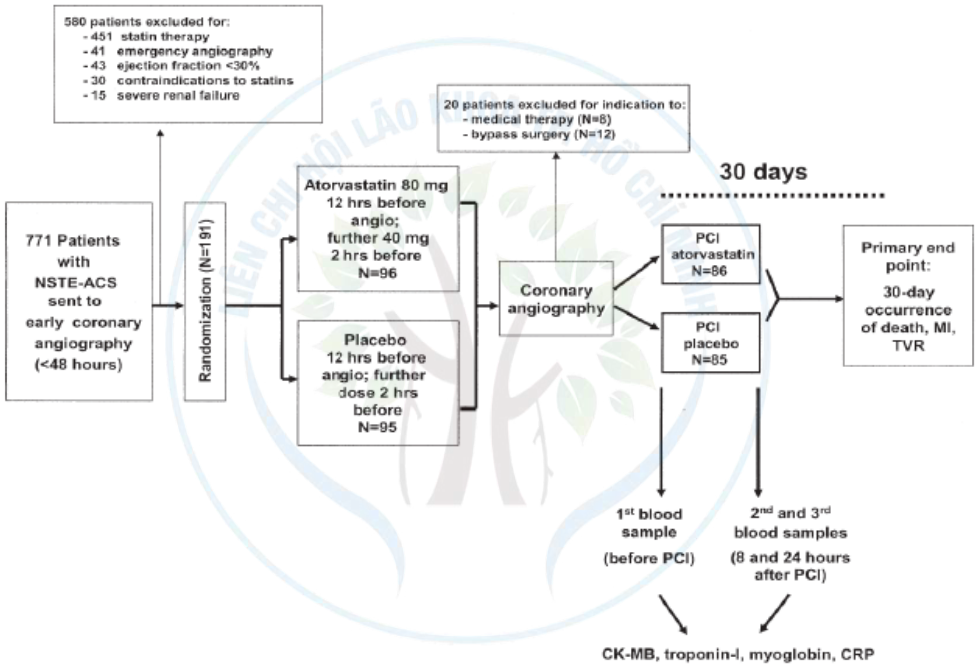
ESC Dyslipidemia GL 2019[2] Recommendations for lipid-lowering therapy in very high-risk patients undergoing PCI

Recommendations	Class	Level
Routine pre-treatment or loading (on a background of chronic therapy) with a high-dose statin should be considered in patients undergoing PCI for an ACS or elective PCI.	IIa	B

PCI= Percutaneous coronary intervention, CI= Confidence interval, ESC= European Society of Cardiology, GL= Guideline, ACS = Acute coronary syndrome

1.Berwanger O. et al. JAMA. 2018;319(13):1331-1340

ARMYDA-ACS trial: Study design (NSTE-ACS)

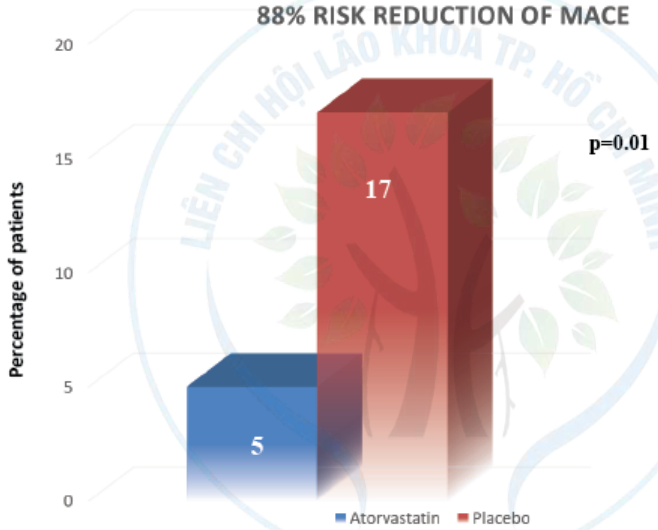


ARMYDA-ACS= Atorvastatin for Reduction of MYocardial Damage During Angioplasty - Acute Coronary Syndromes, CK-MB= Creatine kinase MB, CRP= C-reactive protein, MI= Myocardial infarction, NSTE-ACS= Non–ST-segment elevation acute coronary syndrome, PCI= percutaneous coronary intervention, TVR= Target vessel revascularization, MACE= Major adverse cardiac event, PCI= Percutaneous coronary intervention

Patti et al, JACC Vol. 49, No. 12, 2007: 1272–8

ARMYDA-ACS trial

Composite primary end-point (30-day death, MI, TVR)

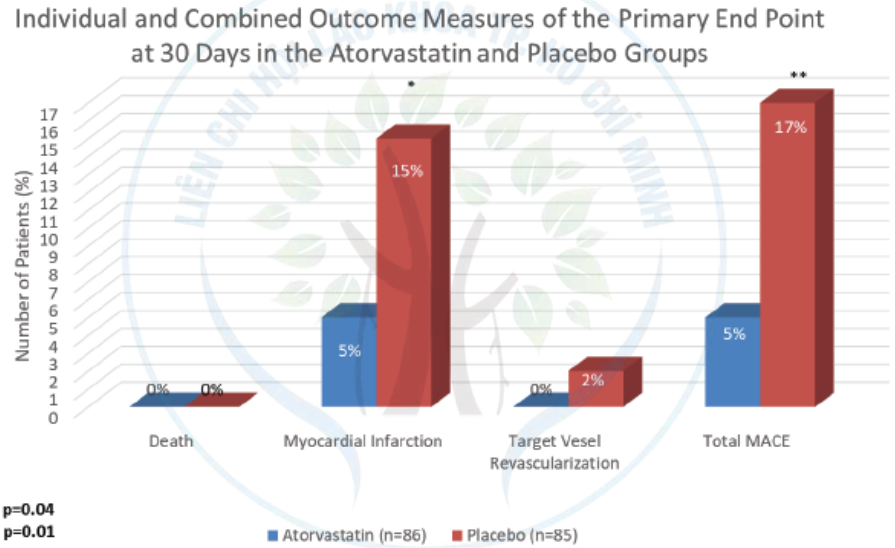


ARMYDA-ACS= Atorvastatin for Reduction of MYocardial Damage During Angioplasty - Acute Coronary Syndromes, MI= Myocardial infarction, TVR= Target vessel revascularization, MACE= Major adverse cardiovascular events

Patti et al, JACC Vol. 49, No. 12, 2007: 1272–8

20

ARMYDA-ACS trial



* p=0.04
** p=0.01

ARMYDA-ACS= Atorvastatin for Reduction of MYocardial Damage During Angioplasty - Acute Coronary Syndromes, MACE= Major adverse cardiovascular events

Patti et al, JACC Vol. 49, No. 12, 2007: 1272–8

21

2013 ACCF/AHA Guideline for the Management of ST-Elevation Myocardial Infarction

Therapy	Indications	Dose/Administration	Avoid/Caution
Statins	• All patients without contraindications	• High-dose atorvastatin 80 mg daily	• Caution with drugs metabolized via *CYP3A4*, fibrates • Monitor for myopathy, hepatic toxicity • Combine with diet and lifestyle therapies • Adjust dose as dictated by targets for LDL cholesterol and non–HDL cholesterol reduction
Nitroglycerin	• Ongoing chest pain • Hypertension and HF	• 0.4 mg sublingual every 5 min up to 3 doses as BP allows • IV dosing to begin at 10 mcg/min; titrate to desired BP effect	• Avoid in suspected RV infarction • Avoid with SBP <90 mm Hg or if SBP >30 mm Hg below baseline • Avoid if recent (24 to 48 h) use of 5′-phosphodiesterase inhibitors
Oxygen	• Clinically significant hypoxemia (oxygen saturation <90%) • HF • Dyspnea	• 2 to 4 L/min via nasal cannula • Increase rate or change to face mask as needed	• Caution with chronic obstructive pulmonary disease and CO_2 retention
Morphine	• Pain • Anxiety • Pulmonary edema	• 4 to 8 mg IV initially, with lower doses in elderly • 2 to 8 mg IV every 5 to 15 min if needed	• Lethargic or moribund patient • Hypotension • Bradycardia • Known hypersensitivity

CLASS I

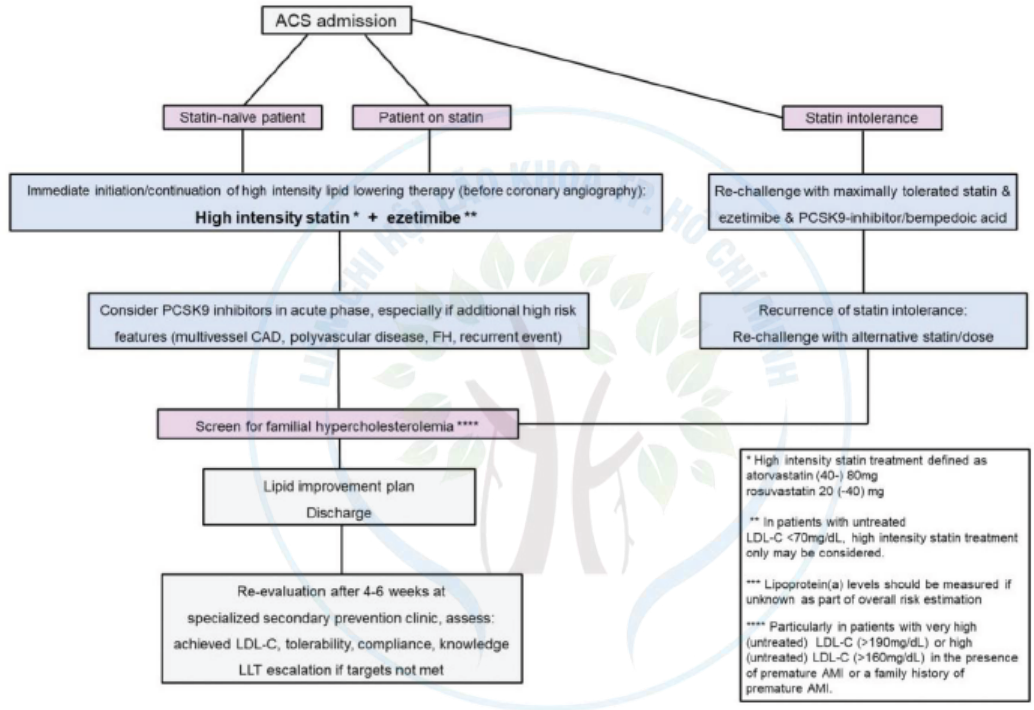
1. High-intensity statin therapy should be initiated or continued in all patients with STEMI and no contraindications to its use (*Level of Evidence: B*)

ACE indicates angiotensin-converting enzyme; ARB, angiotensin receptor blocker; AV, atrioventricular; BP, blood pressure; CO_2, carbon dioxide; EF, ejection fraction; HDL, high-density lipoprotein; HF, heart failure; IV, intravenous; LDL, low-density lipoprotein; LV, left ventricular; MI, myocardial infarction; RV, right ventricular; and SBP, systolic blood pressure.

Among currently available statin, only high-dose atorvastatin (80 mg daily) has been shown to reduce death and ischemic events among patients with ACS

STATIN/ACS

- 'the lower, the better'
- 'strike early and strike strong' approach in the early post-ACS phase with upfront initiation of a combined lipid-lowering approach using high-intensity statins and ezetimibe seems reasonable



European Heart Journal: Acute Cardiovascular Care (2022) 11, 939–949

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

Recommendations for lipid management in patients with moderate-to-severe (Kidney Disease Outcomes Quality Initiative stages 3-5) Chronic Kidney Disease

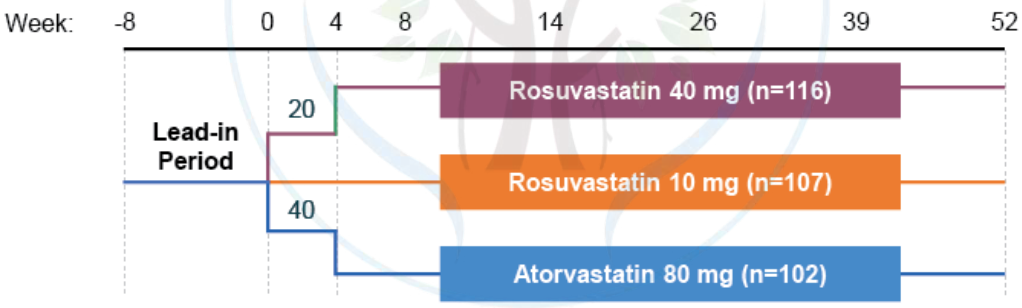
Recommendations	Class	Level
It is recommended that patients with Kidney Disease Outcomes Quality Initiative stage 3–5 CKD are considered to be at high or very-high risk of ASCVD.	I	A
The use of statins or statin/ezetimibe combination is recommended in patients with non-dialysis-dependent stage 3–5 CKD.	I	A
In patients already on statins, ezetimibe, or a statin/ezetimibe combination at the time of dialysis initiation, continuation of these drugs should be considered, particularly in patients with ASCVD.	IIa	C
In patients with dialysis-dependent CKD who are free of ASCVD, commencement of statin therapy is not recommended.	III	A

ESC= European Society of Cardiology, EAS= European Atherosclerosis Society, CKD= Chronic kidney disease, ASCVD= Atherosclerotic cardiovascular disease

Mach F, et al. Eur Heart Journal 2019, 00,1-78

PLANET I Study

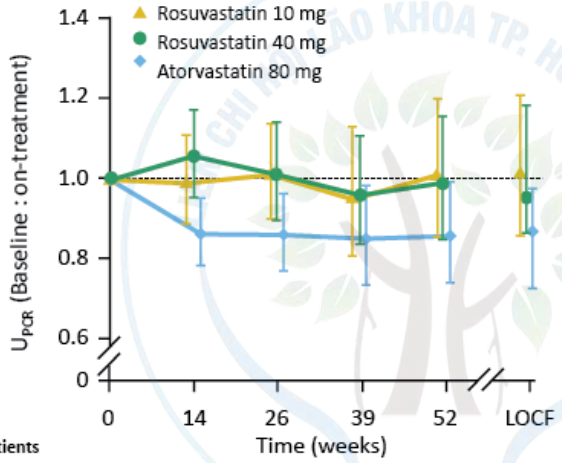
- Patients aged ≥18 years with type I or II diabetes + proteinuria
- 353 patients were assigned to randomized treatment; 325 patients in ITT population
  - Inclusion criteria
    - Moderate proteinuria (urinary protein/creatinine ratio 500–5000 mg/g)
    - Hypercholesterolemia (fasting LDL-C ≥90 mg/dL (2.33 mmol/L)
    - ACE inhibitors or ARBs or both ≥3 months prior to screening
- There was **no placebo group** as it was considered unethical to withhold statin therapy in this patient population[1]



PLANET= Prospective Evaluation of Proteinuria and Renal Function in Diabetic Patients with Progressive Renal Disease, ITT= Intention to treat, ACE= Angiotensin converting enzyme, ARB= Angiotensin Receptor Blocker

De Zeeuw D et al. *Lancet* Diabetes Endocrinol 2015;3:181-90

PLANET I: Primary end point–changes in U_{PCR}



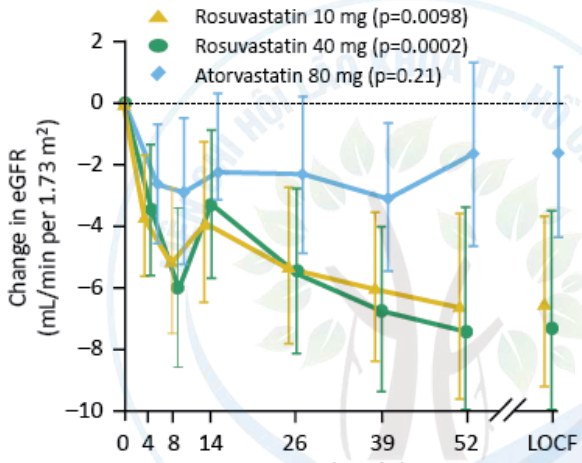
U_{PCR} was significantly lower at 52 weeks than at baseline for the atorvastatin 80 mg group (*P*=0.033).

Number of patients						
Rosuvastatin 10 mg	107	103	97	96	95	107
Rosuvastatin 40 mg	116	112	107	106	106	116
Atorvastatin 80 mg	102	96	91	88	82	102

Data are mean baseline : on-treatment ratios.
Error bars are 95% CIs. LOCF marks 52-week data accounting for all patients in ITT population

PLANET= Prospective Evaluation of Proteinuria and Renal Function in Diabetic Patients with Progressive Renal Disease, U_{PCR}= Urine protein: creatinine ratio, LOCF= Last Observation Carried Forward
De Zeeuw D et al. *Lancet* Diabetes Endocrinol 2015;3:181-90

PLANET I: Secondary end point–changes in eGFR



Mean eGFR at 52 weeks was not significantly different from baseline in the atorvastatin 80 mg group (p=0.21)

Number of patients								
Rosuvastatin 10 mg	107	106	104	103	99	95	95	107
Rosuvastatin 40 mg	116	115	112	111	109	104	109	116
Atorvastatin 80 mg	102	99	98	97	92	86	86	102

Data are mean changes from baseline. Error bars are 95% CIs.
LOCF marks 52-week data accounting for all patients in ITT population.

PLANET= Prospective Evaluation of Proteinuria and Renal Function in Diabetic Patients with Progressive Renal Disease, eGFR= estimated glomerular filtration rate
LOCF= Last Observation Carried Forward
De Zeeuw D et al. *Lancet* Diabetes Endocrinol 2015;3:181-90

Atorvastatin: Proven safety profile across the dose range

Data from a pooled analysis involving 14,236 patients from 49 trials

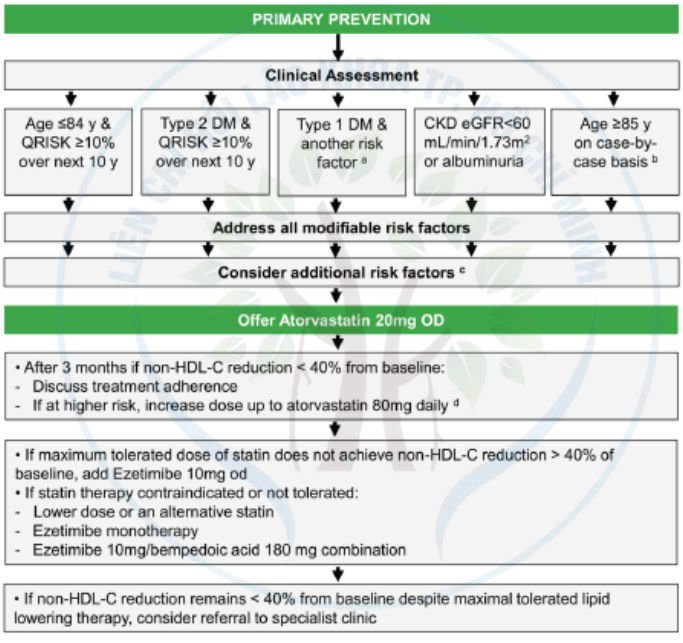
Adverse events, %	Atorvastatin 10 mg (n=7,258)	Atorvastatin 80 mg (n=4,798)	Placebo (n=2,180)
Withdrawals due to treatment-related adverse events	2.4	1.8	1.2
Serious treatment-related nonfatal adverse events	0.2	0.5	4.2
Musculoskeletal	2.3	2.7	1.2
Treatment-related myalgia	1.4	1.5	0.7
Persistent ALT or AST >3 × ULN*	0.1	0.6	0.2
Persistent CPK >10 × ULN*	0	0.06	0
Rhabdomyolysis	0	0	0
Albuminuria	0.1	0.04	0
Hematuria	0.3	0.3	0.1

*Based on the number of patients with laboratory measurements

ALT, alanine transaminase; AST, aspartate transaminase; CPK, creatinine phosphokinase; ULN, upper limit of normal

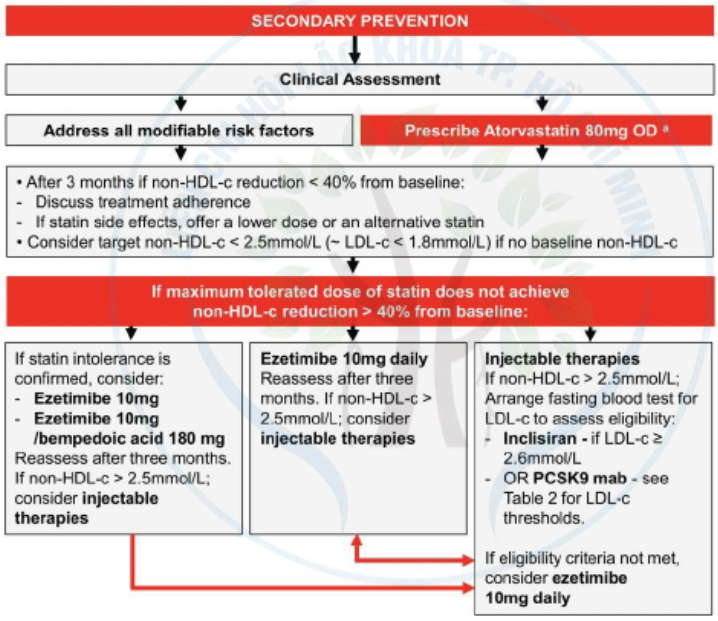
Newman C, et al. *Am J Cardiol* 2006;97:61–67

NICE 2022 : National Institute for Health and Care Excellence guidelines for lipid management



Cegla J. Heart 2022;0:1–7. doi:10.1136/heartjnl-2022-321414

NICE 2022 : National Institute for Health and Care Excellence guidelines for lipid management



Cegla J. Heart 2022;0:1–7. doi:10.1136/heartjnl-2022-321414

Summary

- New US and Europe dyslipidemia guidelines align on statin intensity concept[1,2]
  - Higher risk patients need higher intensity statin
- All ACS patients without contraindication or intolerance: high-dose statin as early as possible, regardless of initial LDL-C (IA)[1]
- Routine short pre-treatment or loading with a high-dose statin should be considered in patients undergoing PCI for an ACS or elective PCI (IIa/B)[1]
- Not all high intensity statins are the same: myocardial perfusion improvement, renal safety[3-5]
- **"the lower, the better'**
- **'strike early and strike strong' approach**


Chân thành cảm ơn quý vị
đã chú ý theo dõi !
HỘI NGHỊ KHOA HỌC THƯỜNG NIÊN 2023
CẬP NHẬT CHẨN ĐOÁN & ĐIỀU TRỊ BỆNH LÝ NGƯỜI CAO TUỔI
14 - 15 - 16.04.2023 | KHÁCH SẠN NALOD - ĐÀ NẴNG