Sekundärprävention

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JOINT ESC GUIDELINES

2016 European Guidelines on cardiovascular disease prevention in clinical practice

The Sixth Joint Task Force of the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice (constituted by representatives of 10 societies and by invited experts)

Developed with the special contribution of the European Association for Cardiovascular Prevention & Rehabilitation (EACPR)

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Nicht-medikamentöse Massnahmen nach Infarkt

Nikotin-Konsum sistieren

Gewichtskontrolle (BMI 20-25kg/m^2)

Alkoholkonsum ≤30mL Äthanol pro Tag

Diät (Fettsäuren, Gemüse, Früchte, Fisch)

Körperliche Aktivität (≥30 Min/Tag)

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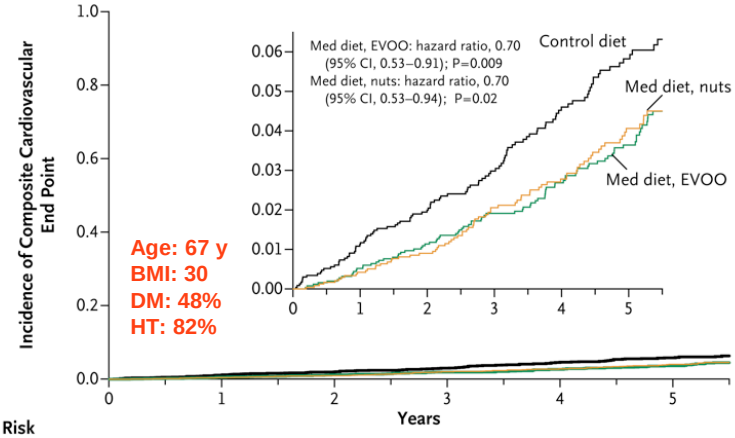
Effects of Mediterranean Diet on AMI, Stroke, and CV Death



No. at Risk						
Control diet	2450	2268	2020	1583	1268	946
Med diet, EVOO	2543	2486	2320	1987	1687	1310
Med diet, nuts	2454	2343	2093	1657	1389	1031

Estruch R et al: NEJM 2013 (PREDIMED)

Nicht-medikamentöse Massnahmen nach Infarkt

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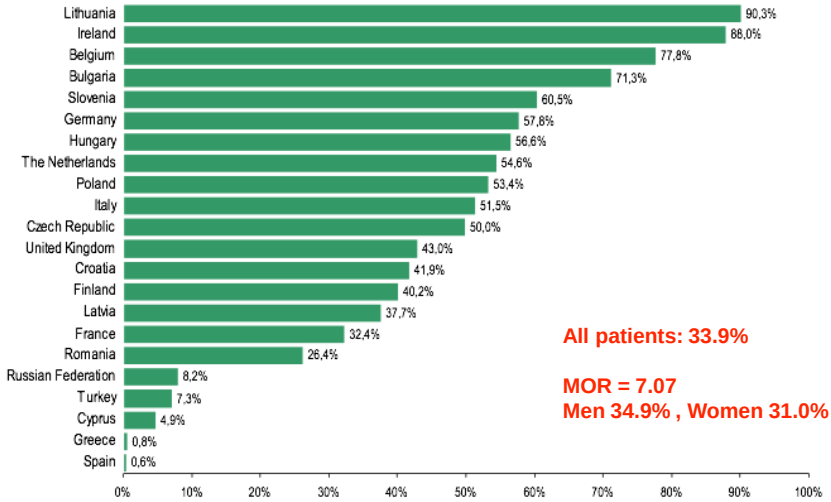
Attendance at Cardiac Rehabilitation Programme



All patients: 33.9%

MOR = 7.07
Men 34.9% , Women 31.0%

Nach Infarkt

<u>Medikamentöse Therapie:</u>

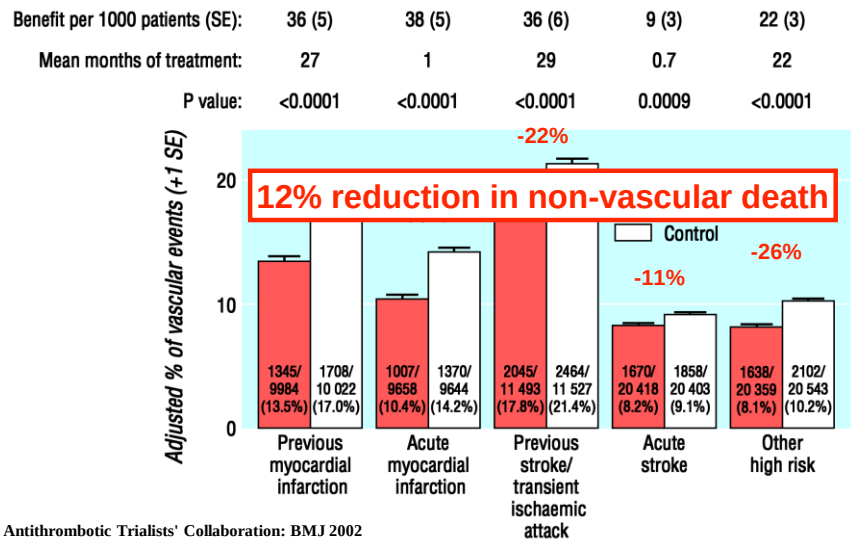
ACE-Hemmer (ARB) bei allen Patienten nach Infarkt (HOPE, EUROPA)

Betablocker bei allen Patienten nach Infarkt, bei eingeschränkte LV-Funktion dauernd

MRA (Eplerenone) nach Infarkt (EF <40%, CHF)

DAPT für ein Jahr, Aspirin lebenslang

Effects of antiplatelet therapy on vascular events



Antithrombotic Trialists' Collaboration: BMJ 2002

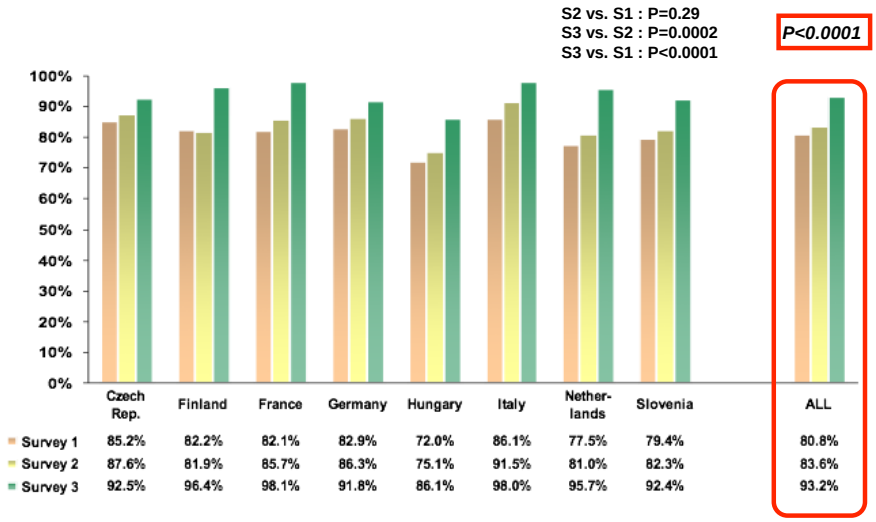
EuroASPIRE Surveys

	n	Participation rate (%)	Age years	Women (%)	PTCA (%)
EuroASPIRE I 1995-1996	3180	77.2	47.8	24.9	25.6
EuroASPIRE II 1999-2000	2975	76.5	48.1	25.2	27.8
EuroASPIRE III 2006-2007	2392	68.4	40.6	23.1	49.8

Consecutive patients, ≤ 70 years at time of index event

ESC, Vienna 2007

Antiplatelet Use

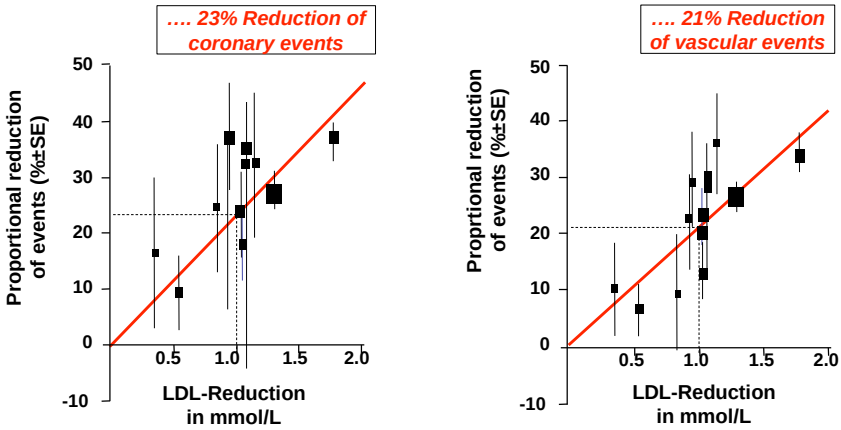


	Czech Rep.	Finland	France	Germany	Hungary	Italy	Nether-lands	Slovenia	ALL
Survey 1	85.2%	82.2%	82.1%	82.9%	72.0%	86.1%	77.5%	79.4%	80.8%
Survey 2	87.6%	81.9%	85.7%	86.3%	75.1%	91.5%	81.0%	82.3%	83.6%
Survey 3	92.5%	96.4%	98.1%	91.8%	86.1%	98.0%	95.7%	92.4%	93.2%

LDL-Reduction with statins and vascular events

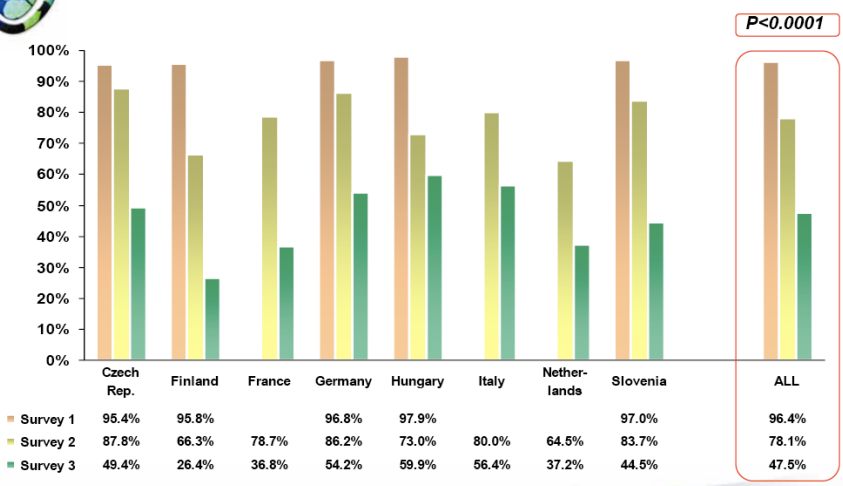
Prospective metaanalysis of 90,056 patients from 14 studies[1]

1 mmol/L LDL-Reduction is associated with…..



CTT Collaborators. *Lancet* 2005

Prevalence of Raised LDL Cholesterol (2)*



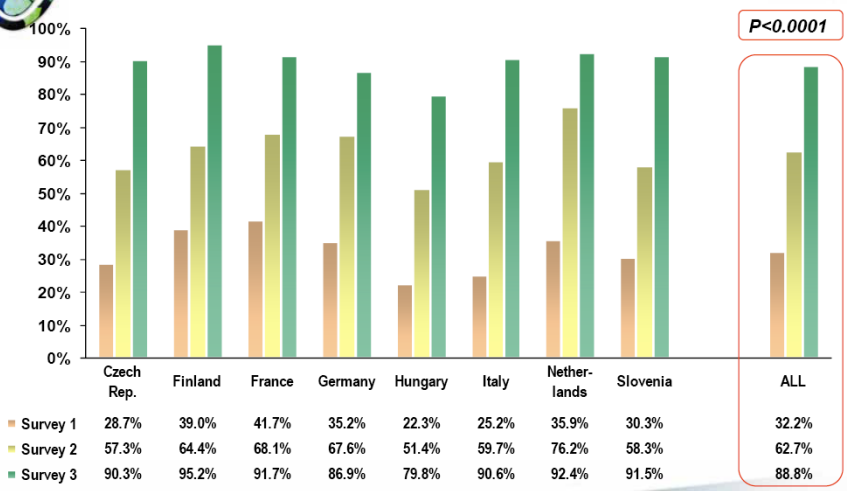
	Czech Rep.	Finland	France	Germany	Hungary	Italy	Nether-lands	Slovenia	ALL
Survey 1	95.4%	95.8%		96.8%	97.9%			97.0%	96.4%
Survey 2	87.8%	66.3%	78.7%	86.2%	73.0%	80.0%	64.5%	83.7%	78.1%
Survey 3	49.4%	26.4%	36.8%	54.2%	59.9%	56.4%	37.2%	44.5%	47.5%

•LDL C ≥ 2.5 mmol/L for patients fasting for at least 6 hours (calculated according to Friedewald formula)

S2 vs. S1 : P=0.001
S3 vs. S2 : P<0.0001
S3 vs. S1 : P<0.0001

www.escardio.org Euro Heart Survey - ESC congress, Vienna, September 2007

Medication Use: Lipid Lowering Drugs



	Czech Rep.	Finland	France	Germany	Hungary	Italy	Nether-lands	Slovenia	ALL
Survey 1	28.7%	39.0%	41.7%	35.2%	22.3%	25.2%	35.9%	30.3%	32.2%
Survey 2	57.3%	64.4%	68.1%	67.6%	51.4%	59.7%	76.2%	58.3%	62.7%
Survey 3	90.3%	95.2%	91.7%	86.9%	79.8%	90.6%	92.4%	91.5%	88.8%

S2 vs. S1 : P<0.0001
S3 vs. S2 : P<0.0001
S3 vs. S1 : P<0.0001

www.escardio.org Euro Heart Survey - ESC congress, Vienna, September 2007

EMPFEHLUNGEN NACH IAS 2003

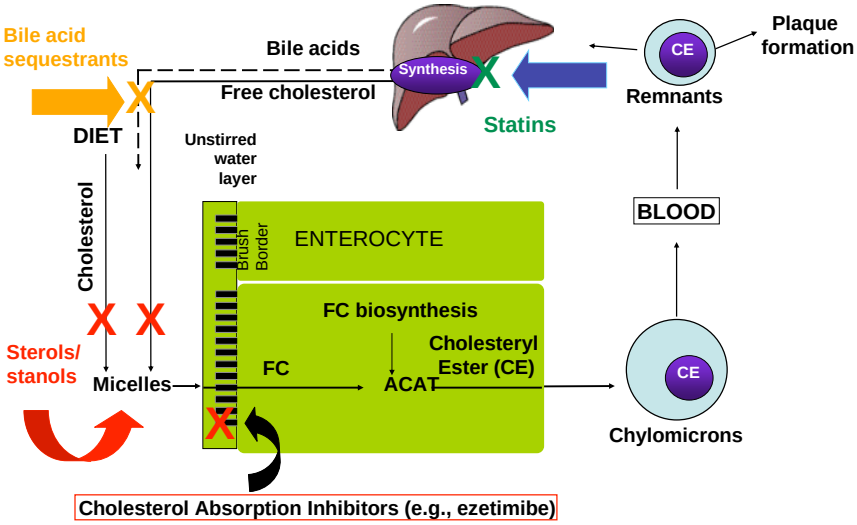
modifiziert und aktualisiert für die Schweiz 2012

LDL-Cholesterin	■ Sehr hohes Risiko: < 1.8 mmol/l und/oder Reduktion > 50%, wenn Zielwert nicht erreicht werden kann* ■ Hohes Risiko (> 20%): < 2.6 mmol/l (ZW)[1] ■ Intermediäres Risiko (10–20%): < 3.4 mmol/l (ZW)[1] ■ Niedriges Risiko (< 10%): < 4.1 mmol/l (ZW)[1]
Triglyzeride	■ TG > 1.7 mmol/l (IW): Behandlung bei Diabetes, Metabolischem Syndrom ■ TG > 5.0 mmol/l (IW): Behandlung bei allen Personen indiziert ■ TG > 10.0 mmol/l (IW): Primärziel: Verhinderung der akuten Pankreatitis, lipidologisches Konsilium
HDL-Cholesterin	■ Bei niedrigen Werten: HDL-Cholesterin erhöhen (kein ZW) durch Optimierung des Lebensstils (Rauchabstinenz, Bewegungstraining, Gewichtsreduktion bei Übergewicht/Adipositas)

EAS/ESC EMPFEHLUNGEN 2011

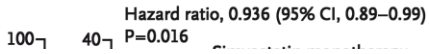
LDL-Cholesterin	■ Sehr hohes Risiko (> 10%)[2]: < 1.8 mmol/l (ZW) und/oder Reduktion > 50%, wenn ZW nicht erreicht werden kann ■ Hohes Risiko (≥ 5% und < 10%)[2]: < 2.5 mmol/l (ZW) ■ Intermediäres Risiko (≥ 1% und < 5%)[2]: < 3.0 mmol/l (ZW) ■ Niedriges Risiko (< 1%)[2]: > 2.5 mmol/l: Lebensstil-Intervention > 4.9 mmol/l: (IW): Medikamente, falls Lebensstil-Intervention nicht erfolgreich

Influence on Cholesterol Metabolism



Effects of Simvstatin/Ezetimibe vs Simvastatin on CV death, CAD events, stroke in ACS patients

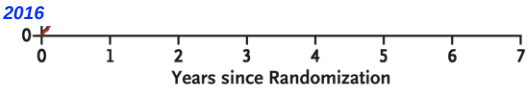
LDL inclusion 1.3 - 3.2 mmol/L (under Tx 1.3-2.6 mmol/L)



Statins should be used as the drugs of first choice in patients with hypercholesterolaemia or combined hyperlipidaemia

Combination treatment may be needed. Data indicate that combination therapy with ezetimibe also brings a benefit that is in line with the CholesterolTreatment Trialists' (CTT) Collaboration meta-analysis. It must be stressed, however, that the only combination that has evidence of clinical benefit (one large RCT) is that of a statin combined with ezetimibe.

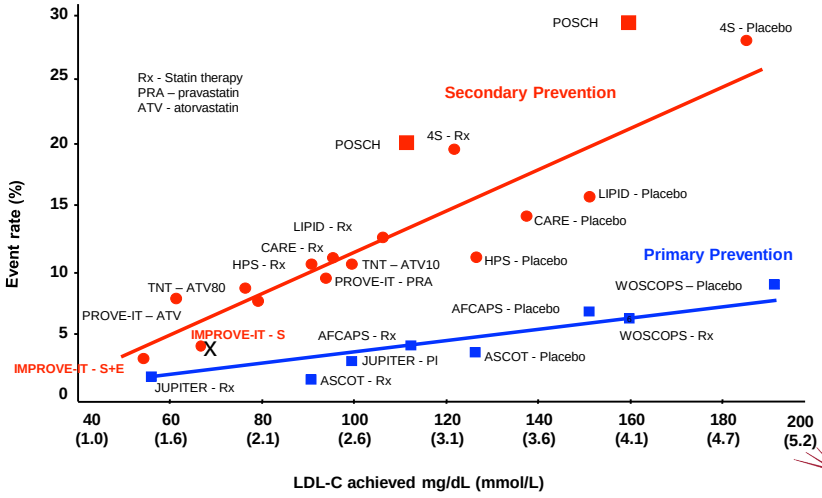
ESC Guidelines 2016



No. at Risk								
Simvastatin–ezetimibe	9067	7371	6801	6375	5839	4284	3301	1906
Simvastatin	9077	7455	6799	6327	5729	4206	3284	1857

N Engl J Med 2015

The lower the better!



Adapted from Rosensen RS. *Exp Opin Emerg Drugs* 2004;**9**(2):269-279

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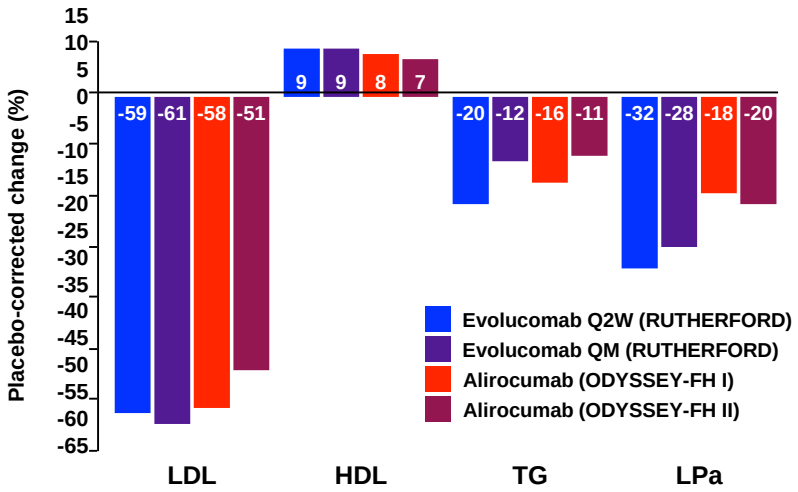
Effects of PCSK9 Antibodies on Lipids in Patients with Familial Hypercholesterolemia



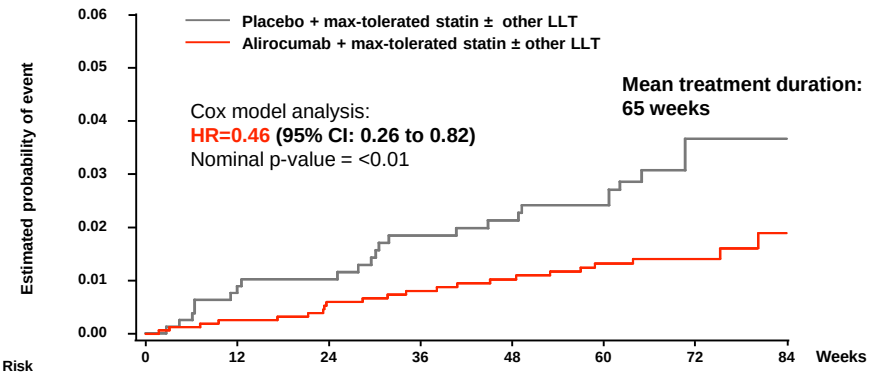
Baseline LDL 3.5 - 4.2 mmol/L

Post-hoc Adjudicated Cardiovascular TEAEs

(Same as primary endpoint of ongoing ODYSSEY OUTCOMES trial†)

Kaplan-Meier Estimates for Time to First Adjudicated Major CV Event

Safety Analysis (at least 52 weeks for all patients continuing treatment, including 607 patients who completed W78 visit)

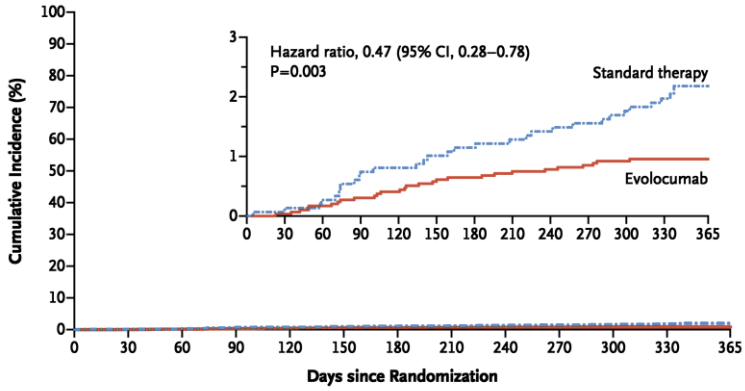


No. at Risk	0	12	24	36	48	60	72	84
Placebo	788	776	731	703	682	667	321	127
Alirocumab	1550	1534	1446	1393	1352	1335	642	252

†Primary endpoint for the ODYSSEY OUTCOMES trial: **CHD death, Non-fatal MI, Fatal and non-fatal ischemic stroke, Unstable angina requiring hospitalisation**. LLT, lipid-lowering therapy

ODYSSEY

Effects of Evolocumab on Cardiovascular Events
OSLER



No. at Risk

Standard therapy	1489	1486	1481	1473	1467	1463	1458	1454	1447	1438	1428	1361	407
Evolocumab	2976	2970	2962	2949	2938	2930	2920	2910	2901	2885	2871	2778	843

NEJM 2015

USA: $ 14’600/Jahr

USA: $ 14’100/Jahr
UK: $ 6’800/Jahr

Konklusionen

Lifestyle optimieren

Aspirin lebenslang, DAPT ein Jahr

ACE-Hemmer, Betablocker

Statin (+ Ezetimibe): Ziel LDL <1.8 mmol/L
ev. PCSK9-Hemmer