Dislipidemie: cosa dicono le linee guida

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2025 Focused Update of the 2019 ESC/EAS Guidelines for the management of dyslipidaemias

- Prevenzione primaria
- Prevenzione secondaria
- Casi particolari

Prevenzione primaria
Soggetti apparentemente «SANI»

Obiettivi

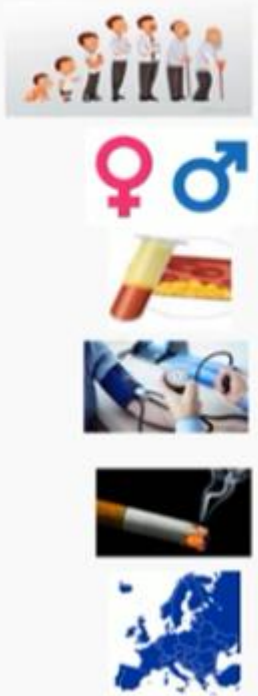
- Identificare i soggetti che devono beneficiare di un trattamento per ridurre LDL
- Identificare soprattutto fra i piu' giovani quelli che sono piu' rischio di sviluppare eventi legati alla malattia aterosclerotica in toto (*concetto guida è tempo di esposizione prolungato* al fattore di rischio)
- «Perfezionare» il calcolo del rischio di sviluppare malattia CV attraverso individuazione di fattori supplementari che modificano il rischio (*evitare di sotto-trattare i pazienti*)

Cardiovascular risk estimation: New Recommendations

Recommendations	Class	Level
Recommendations for cardiovascular risk estimation in persons without known cardiovascular disease		
SCORE2 is recommended in apparently healthy people <70 years of age without established ASCVD, DM, CKD, genetic/rare lipid or BP disorders for estimation of 10-year fatal and non-fatal CVD risk.	I	B
SCORE2-OP is recommended in apparently healthy people ≥70 years of age without established ASCVD, DM, CKD, genetic/rare lipid or BP disorders for estimation of 10-year fatal and non-fatal CVD risk.	I	B

How is SCORE2 / SCORE2-OP calculated?

(accessible at http://www.heartscore.org)



Very high risk	People with any of the following: • Documented ASCVD, either clinical or unequivocal on imaging. Documented ASCVD includes previous ACS (MI or unstable angina), chronic coronary syndromes, coronary revascularization (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[a] on coronary angiography or CT scan or on carotid or femoral ultrasound or markedly elevated CAC score by CT[b] • DM with target organ damage,[c] or at least three major risk factors, or early onset of T1DM of long duration (>20 years) • Severe CKD (eGFR <30 mL/min/1.73 m^2) • A calculated SCORE2 or SCORE2-OP ≥20% for 10 year risk of fatal or non-fatal CVD • FH with ASCVD or with another major risk factor
High risk	People with any of the following: • Markedly elevated single risk factors, in particular TC >8 mmol/L (>310 mg/dL), LDL-C >4.9 mmol/L (>190 mg/dL), or BP ≥180/110 mmHg • Patients with FH without other major risk factors • Patients with DM without target organ damage,[c] with DM duration ≥10 years or another additional risk factor • Moderate CKD (eGFR 30–59 mL/min/1.73 m^2) • A calculated SCORE2 or SCORE2-OP ≥10% and <20% for 10 year risk of fatal or non-fatal CVD
Moderate risk	People with any of the following: • Young patients (T1DM <35 years; T2DM <50 years) with DM duration <10 years, without other risk factors • Calculated SCORE2 or SCORE2-OP ≥2% and <10% for 10 year risk of fatal or non-fatal CVD
Low risk	• Calculated SCORE2 or SCORE2-OP <2% for 10 year risk of fatal or non-fatal CVD

Risk modifiers for consideration beyond the risk estimation based on the SCORE2 and SCORE2-OP algorithms

Demographic/clinical conditions
• Family history of premature CVD (men: <55 years; women: <60 years)
• High-risk (e.g. Southern Asian) ethnicity
• Stress symptoms and psychosocial stressors
• Social deprivation
• Obesity
• Physical inactivity
• Chronic immune-mediated/inflammatory disorder
• Major psychiatric disorders
• History of premature menopause
• Pre-eclampsia or other hypertensive disorders of pregnancy
• Human immunodeficiency virus infection
• Obstructive sleep apnoea syndrome.
Biomarkers
• Persistently elevated hs-CRP (>2 mg/L)
• Elevated Lp(a) [>50 mg/dL (>105 nmol/L)]

Cardiovascular risk estimation: New Recommendations

Recommendations	Class	Level	
Recommendations for cardiovascular risk estimation in persons without known cardiovascular disease			
SCORE2 is recommended in apparently healthy people <70 years of age without established ASCVD, DM, CKD, genetic/rare lipid or BP disorders for estimation of 10-year fatal and non-fatal CVD risk.	I	B	
SCORE2-OP is recommended in apparently healthy people ≥70 years of age without established ASCVD, DM, CKD, genetic/rare lipid or BP disorders for estimation of 10-year fatal and non-fatal CVD risk.	I	B	
Presence of **subclinical coronary atherosclerosis** by imaging or **increased CAC score by CT** should be considered as risk modifiers in individuals at moderate risk or individuals around treatment decision thresholds to improve risk classification.	IIa	B	Revised
Risk modifiers should be considered in individuals at moderate risk or individuals around treatment decision thresholds to improve risk classification.	IIa	B	New

Cardiovascular risk estimation: New Recommendations

Recommendations	Class	Level
Recommendations for cardiovascular risk estimation in persons without known cardiovascular disease		
In **primary prevention, pharmacological LDL-C-lowering therapy** is recommended in persons: • at very high risk and LDL-C ≥1.8 mmol/L (70 mg/dL), or • at high risk and LDL-C ≥2.6 mmol/L (100 mg/dL) despite optimization of non-pharmacological measures, to lower CVD risk.	I	A
In **primary prevention, pharmacological LDL-C-lowering therapy** should be considered in persons: • at very high risk and LDL-C ≥1.4 (55 mg/dL) but <1.8 mmol/L (70 mg/dL), or • at high risk and LDL-C ≥1.8 (70 mg/dL) but <2.6 mmol/L (100 mg/dL), or • at moderate risk and LDL-C ≥2.6 (100 mg/dL) but <4.9 mmol/L (190 mg/dL), or • at low risk and LDL-C ≥3.0 (116 mg/dL) but <4.9 mmol/L (190 mg/dL) despite optimization of non-pharmacological measures, to lower CVD risk.	IIa	A

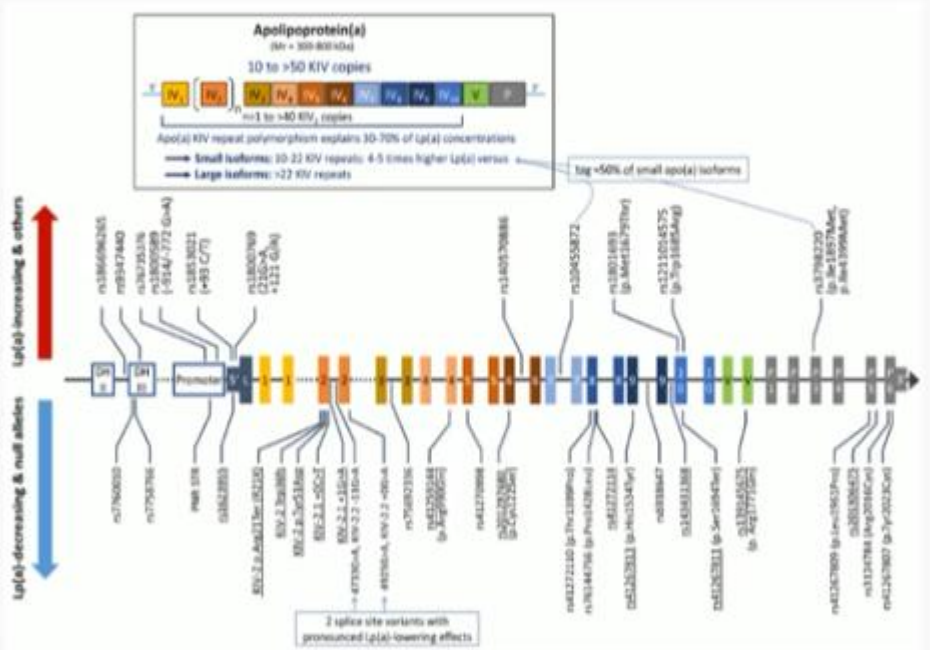
Table 4 Intervention strategies as a function of total cardiovascular risk and untreated low-density esterol levels

Total CV risk	Untreated LDL-C levels				
	<1.4 mmol/L (<55 mg/dL)	1.4 to <1.8 mmol/L (55 to <70 mg/dL)	1.8 to <2.6 mmol/L (70 to <100 mg/dL)	2.6 to <3.0 mmol/L (100 to <116 mg/dL)	3.0 to <4.9 mmol/L (116 to <190 mg/dL
Low	Lifestyle advice	Lifestyle advice	Lifestyle advice	Lifestyle advice	Lifestyle modification, consider adding drug if uncontrolled
Moderate	Lifestyle advice	Lifestyle advice	Lifestyle advice	Lifestyle modification, consider adding drug if uncontrolled	Lifestyle modification, consider adding drug if uncontrolled
High	Lifestyle advice	Lifestyle advice	Lifestyle modification, consider adding drug if uncontrolled	Lifestyle modification and concomitant drug intervention	Lifestyle modification and concomitant drug intervention
Very high: primary prevention	Lifestyle modification, consider adding drug	Lifestyle modification, consider adding drug	Lifestyle modification and concomitant drug intervention	Lifestyle modification and concomitant drug intervention	Lifestyle modification and concomitant drug intervention
Very high: secondary prevention	Lifestyle modification and concomitant drug intervention	Lifestyle modification and concomitant drug intervention	Lifestyle modification and concomitant drug intervention	Lifestyle modification and concomitant drug intervention	Lifestyle modification and concomitant drug intervention

CV, cardiovascular; LDL-C, low-density lipoprotein cholesterol; N/A, not applicable.
[a]In individuals with untreated LDL-C levels ≥4.9 mmol/L, total CV risk is already at least high (*Table 3*).

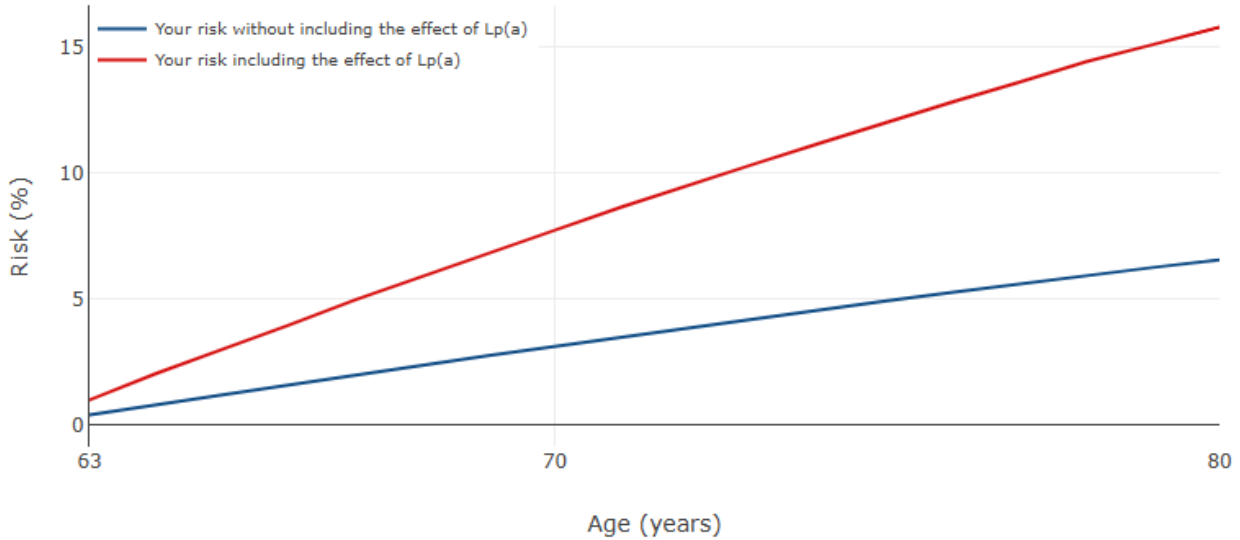
Determinants of Lp (a)

- Genetics (≈90%)
- Ethnicity
- Kidney dysfunction (increase)
- Liver dysfunction (decrease)
- Gender (slight increase after menopause)
- Hormones (thyroid, growth hormone, sex hormones)
- Inflammation (increase)



Atherosclerosis 349:17-35, 2022

Your risk of having a heart attack or stroke



Your risk of having a heart attack or stroke up to age 80 is: 6.5%

With an Lp(a) level of 150 mg/dL, your estimated risk of having a heart attack or stroke up to age 80 changes from 6.5% to: 15.8%

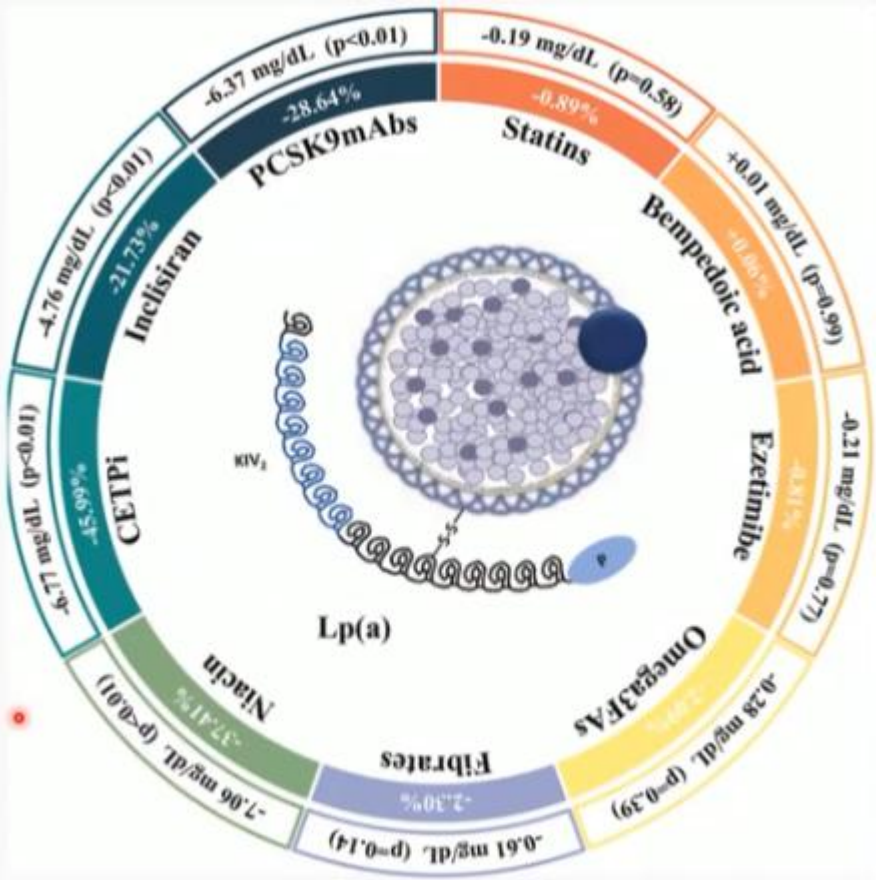
https://eas--society-org.webpkgcache.com/doc/-/s/eas-society.org/page/lipoproteina-consensus-2022/

http://www.lpaclinicalguidance.com/

Effect of LLT on Lp(a)

Lifestyle: No change
High-intensity statin: no change
Ezetimibe, Bempedoic acid : no change
PCSK9 inhibitor: decrease by 25%
Niacin: decrease by 25% but no clinical benefit
Obicetrapib: decrease by 30-50 % ?

Apheresis: decrease up to 70 %
Specific Lp(a) lowering therapies awaited



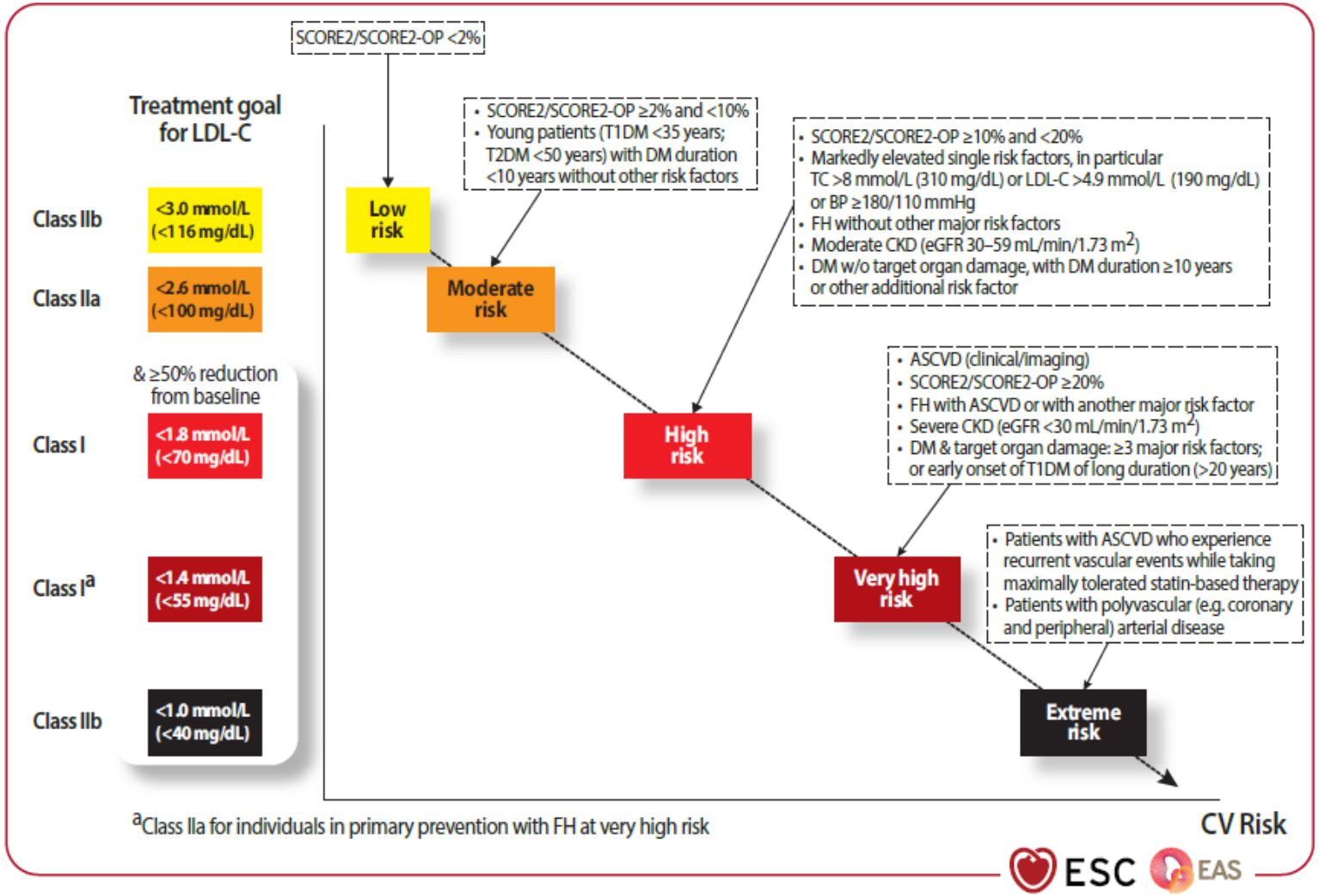
Atherosclerosis 2025; 408:120420

New Recommendation

Recommendations	Class	Level
Recommendation for measurement of lipoprotein(a)		
Lp(a) levels above 50 mg/dL (105 nmol/L) should be considered in all adults as a CV risk-enhancing factor, with higher Lp(a) levels associated with a greater increase in risk.	IIa	B

In individuals at moderate risk or close to treatment decisions, elevated Lp(a) levels should be considered to reclassify CV risk category

Prevenzione Secondaria



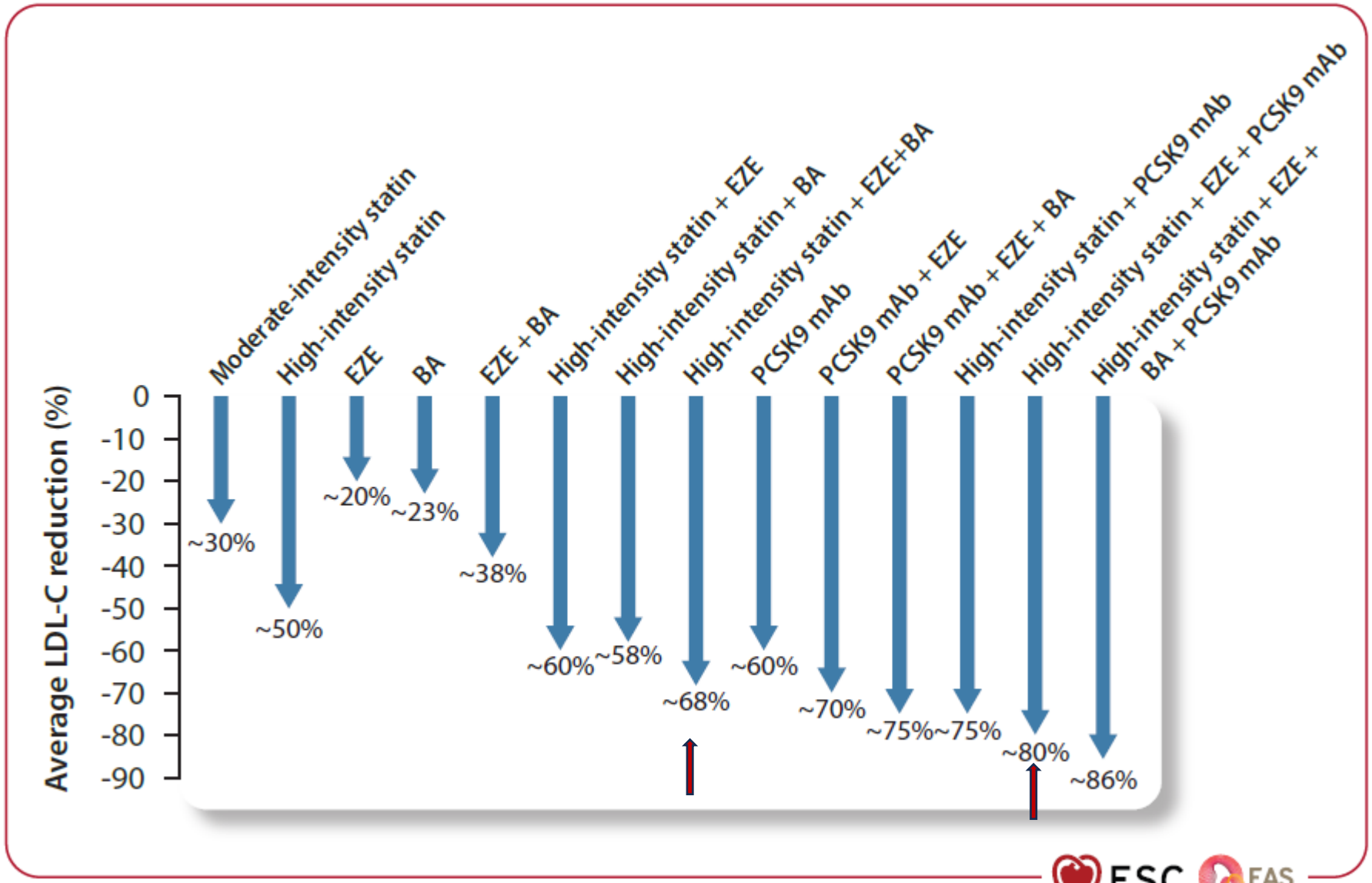
Prevenzione Secondaria

Lipid-lowering therapies during index hospitalization for acute coronary syndromes

New recommendations

LDL-C lowering to recommended goals after MI. A stepwise approach for LDL-C lowering after MI might therefore result in delayed goal attainment as compared with early intensification of treatment.[75,76] These data support 'the sooner, the lower, the better' as a therapeutic strategy for LDL-C lowering in patients with ACS.[58]

for the management of patients with ACS,[58] this Task Force proposes a strategy of early, intensive LDL-C lowering to be considered in all patients with ACS, with immediate initiation of statin therapy and combination treatment with one or more classes of non-statin therapy with proven CV benefit as needed, depending on each patient's lipid-lowering therapy prior to the ACS event. The choice of drug for combination therapy should be based on the magnitude of additional LDL-C lowering required. Several drugs and drug combinations with various efficacies and onsets of action are available to enable such a 'strike early and strong' approach (*Figure 2*). *Recommendation Table 3* includes two new recommen-

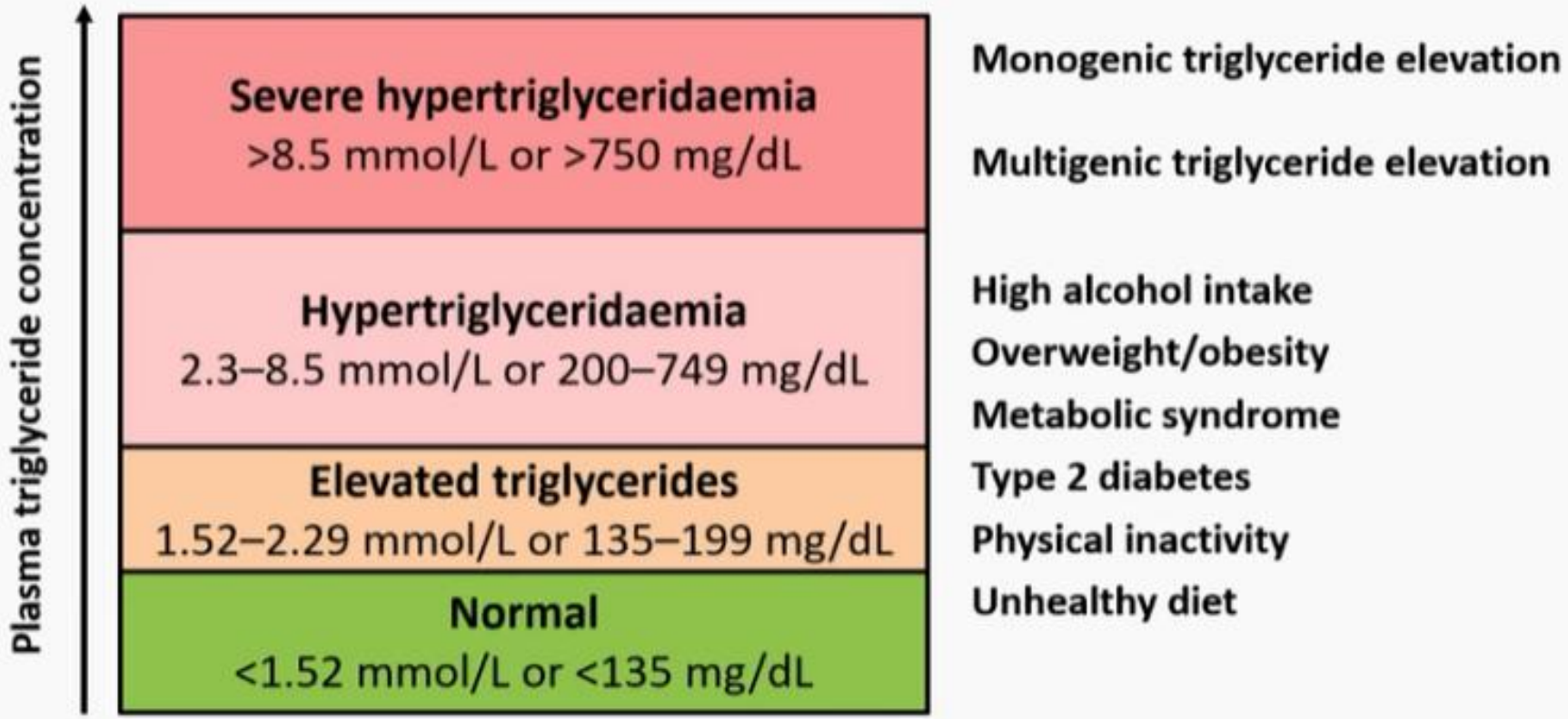

Average LDL-C reduction (%)
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Moderate-intensity statin
~30%
High-intensity statin
~50%
EZE
~20%
BA
~23%
EZE + BA
~38%
High-intensity statin + EZE
~60%
High-intensity statin + BA
~58%
High-intensity statin + EZE+BA
~68%
PCSK9 mAb
~60%
PCSK9 mAb + EZE
~70%
PCSK9 mAb + EZE + BA
~75%
High-intensity statin + PCSK9 mAb
~75%
High-intensity statin + EZE + PCSK9 mAb
~80%
High-intensity statin + EZE + BA + PCSK9 mAb
~86%

ESC EAS

Casi particolari

- Ipertrigliceridemia
- HIV
- Tumore e terapia con antracicline

Hypertriglyceridaemia – classification and common causes



Triglyceride-rich lipoproteins – lifestyle modifications 2019

Lifestyle interventions to reduce TG-rich lipoprotein levels	Magnitude of the effect		Level
Reduce excessive body weight	+	<5%	A
Reduce alcohol intake	+++	>10%	A
Increase habitual physical activity	++	5-10%	A
Reduce total amount of dietary carbohydrates	++	5-10%	A
Reduce intake of mono- and disaccharides	++	5-10%	B
Replace saturated fats with mono- or polyunsaturated fats	+	<5%	B

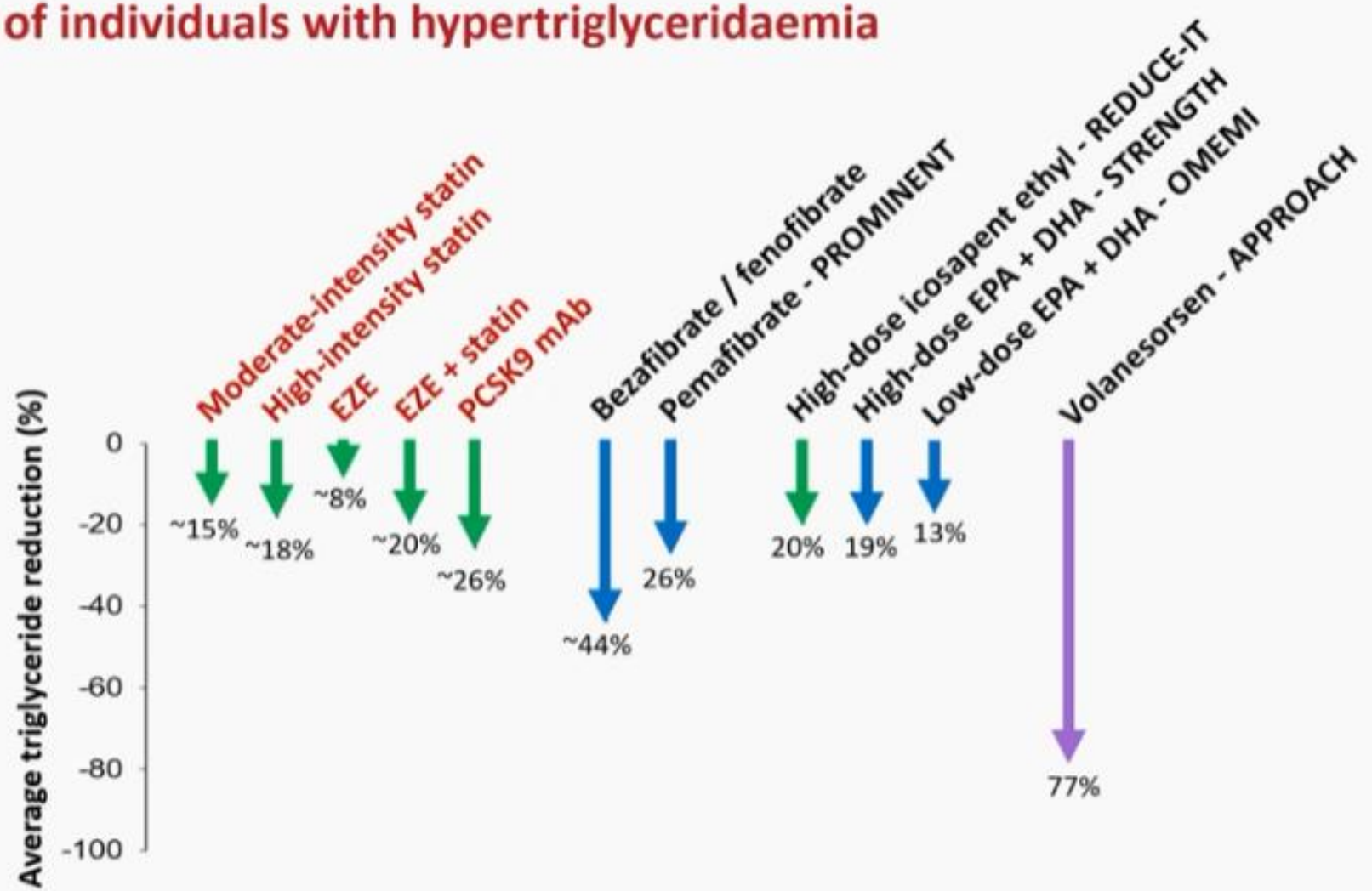
2019 ESC/EAS Guidelines for the management of dyslipidaemias

Eur Heart J 2020;41:111-118

Drug treatment of individuals with hypertriglyceridaemia

Average reduction in triglyceride levels with different pharmacological therapies.

Cardiovascular benefit →
No cardiovascular benefit →
Reduces pancreatitis risk →



Recommendations	Class	Level
Recommendations for drug treatment of patients with hypertriglyceridaemia		
Volanesorsen (300 mg/week) should be considered in patients with severe hypertriglyceridaemia (>750 mg/dL, >8.5 mmol/L) due to familial chylomicronaemia syndrome, to lower triglyceride levels and reduce the risk of pancreatitis.	IIa	B

Revised 2025

Recommendations	Class	Level
Recommendations for drug treatment of patients with hypertriglyceridaemia		
High-dose icosapent ethyl (2 x 2 g/day) should be considered in combination with a statin in high-risk or very high-risk patients with elevated triglyceride levels (fasting triglyceride level 135–499 mg/dL or 1.52–5.63 mmol/L) to reduce the risk of cardiovascular events.	IIa	B

Unchanged recommendations from 2019

Recommendations	Class	Level
Statin treatment is recommended as the first drug of choice to reduce CVD risk in high-risk individuals with hypertriglyceridaemia [TG levels >2.3 mmol/L (>200 mg/dL)].	I	B
In primary prevention patients who are at LDL-C goal with TG levels >2.3 mmol/L (>200 mg/dL), fenofibrate or bezafibrate may be considered in combination with statins.	IIb	B
In high-risk patients who are at LDL-C goal with TG levels >2.3 mmol/L (>200 mg/dL), fenofibrate or bezafibrate may be considered in combination with statins.	IIb	C

2019 ESC/EAS Guidelines for the management of dyslipidaemias

Eur Heart J 2020;41:111-118

Primary prevention in people with human immunodeficiency virus infection: Revised recommendation

Statin therapy is recommended for **people in primary prevention aged ≥40 years with HIV**, irrespective of estimated cardiovascular risk and LDL-C levels, to reduce the risk of cardiovascular events; the choice of statin should be based on potential drug interactions.	I	B

Patients with cancer at high or very high chemotherapy-related cardiovascular toxicity risk: New recommendation

Statins should be considered in adult patients at **high or very high risk of developing chemotherapy-related cardiovascular toxicity** to reduce the risk of anthracycline-induced cardiac dysfunction.	IIa	B

BIELLA CUOR

ceutica

SPORT - Supplements, Placebo,

N = 190

Inclusion

- No ASCVD, elevated 10-year risk
- LDL 1.8-4.9 or 70-190 mg/dL

Primary endpoint

- Percent change in LDL cholesterol at 28 days

Randomisation

- Rosuvastatin 5 mg
- Placebo
- Nature Made Fish Oil 2,400 mg
- NutriFlair cinnamon 2,400 mg
- Garlique garlic 5,000 µg allicin
- Bio-Schwartz turmeric curcumin with bioperine 4,500 mg
- Nature Made – CholesterolOff Plus 1,600 mg plant sterols
- Arazo Nutrition red yeast rice 2,400 mg

ESC Congress 2025 Madrid — TOGETHER WITH World Congress of Cardiology

HA ADOTTATO IL PRESENTE REGOLAMENTO:

Articolo 1

L'allegato III del regolamento (CE) n. 1925/2006 è così modificato:

1) nella tabella della parte B «Sostanze soggette a restrizioni» è aggiunta, in ordine alfabetico, la voce seguente:

Sostanza soggetta a restrizioni	Condizioni d'uso	Prescrizioni aggiuntive
«Monacoline da riso rosso fermentato	Una singola dose di prodotto per l'assunzione giornaliera deve apportare meno di 3 mg di monacoline da riso rosso fermentato.	L'etichetta deve recare il numero di singole dosi di prodotto per l'assunzione massima giornaliera e un'avvertenza a non consumare un quantitativo giornaliero pari o superiore a 3 mg di monacoline da riso rosso fermentato. L'etichetta deve specificare il tenore di monacoline per dose di prodotto. L'etichetta deve includere le avvertenze seguenti: "Non deve essere consumato dalle donne in gravidanza o in allattamento, dai bambini di età inferiore ai 18 anni e dagli adulti di età superiore ai 70 anni."; "Consultare un medico sul consumo di questo prodotto se si manifestano problemi di salute."; "Non deve essere consumato se si assumono medicinali per abbassare il colesterolo."; "Non deve essere consumato se già si consumano altri prodotti contenenti riso rosso fermentato.";»

2) nella tabella della parte C «Sostanze sottoposte alla sorveglianza della Comunità» è aggiunta, in ordine alfabetico, la voce seguente:

«Monacoline da riso rosso fermentato».

Articolo 2

Il presente regolamento entra in vigore il ventesimo giorno successivo alla pubblicazione nella *Gazzetta ufficiale dell'Unione europea*.

Il presente regolamento è obbligatorio in tutti i suoi elementi e direttamente applicabile in ciascuno degli Stati membri.

Fatto a Bruxelles, il 1° giugno 2022

https://eur-lex.europa.eu/eli/reg/2022/860/oj

Per la Commissione
La presidente
Ursula VON DER LEYEN

III B