Raggiungimento del target di LDL-c in PLWH in relazione al rischio cardiovascolare individuale: uno studio retrospettivo, monocentrico e osservazionale

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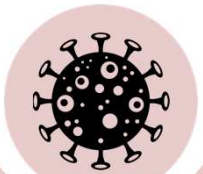
Dr. GIORGIA CARROZZO has **no** financial relationships with commercial entities to disclose

Background

Excess risk of cardiovascular disease in PLWH compared with people without HIV



Virus related mechanism

- Generalized inflammation
- Arterial inflammation
- Increase immune activation
- Increased coagulation markers

ART-related mechanism

- Side effects
- Drug interactions
- Weight gain

Non-HIV specific mechanism

- Traditional risk factors
- Non traditional risk factors (HCV, CMV)

So-Armah K, Benjamin LA, Bloomfield GS, Feinstein MJ, Hsue P, Njuguna B, Freiberg MS. HIV and cardiovascular disease. Lancet HIV. 2020 Apr;7(4):e279-e293. doi: 10.1016/S2352-3018(20)30036-9. PMID: 32243826; PMCID: PMC9346572.

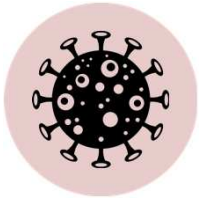
Background

Managing dyslipidaemia for the prevention of CVD

Life style modification

Statins

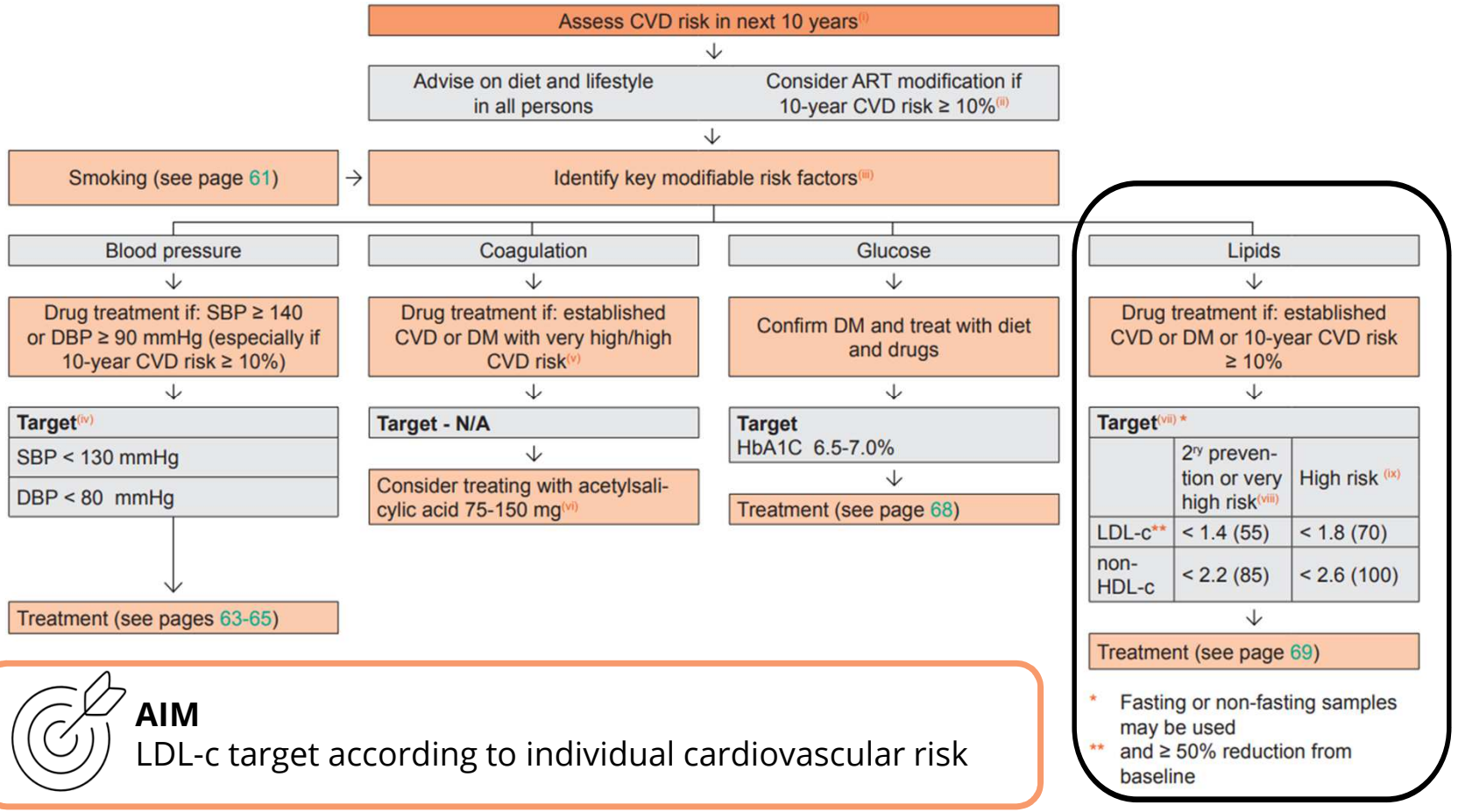
- Lipid-lowering properties
- Anti-inflammatory effects
- Stabilize coronary plaques

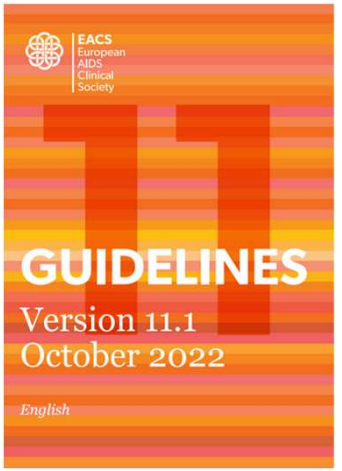


More "lipid-friendly" ART regimens

Deeks SG, Tracy R, Douek DC. Systemic effects of inflammation on health during chronic HIV infection. Immunity. 2013 Oct 17;39(4):633-45. doi: 10.1016/j.immuni.2013.10.001.

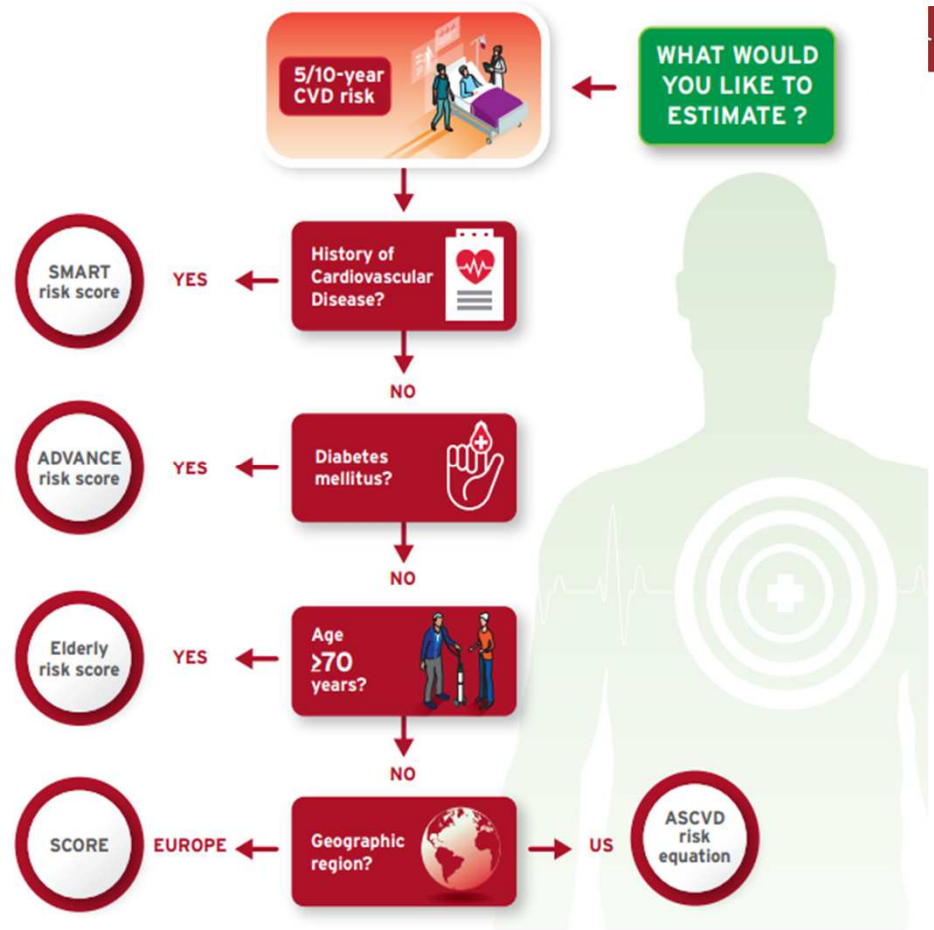
Background



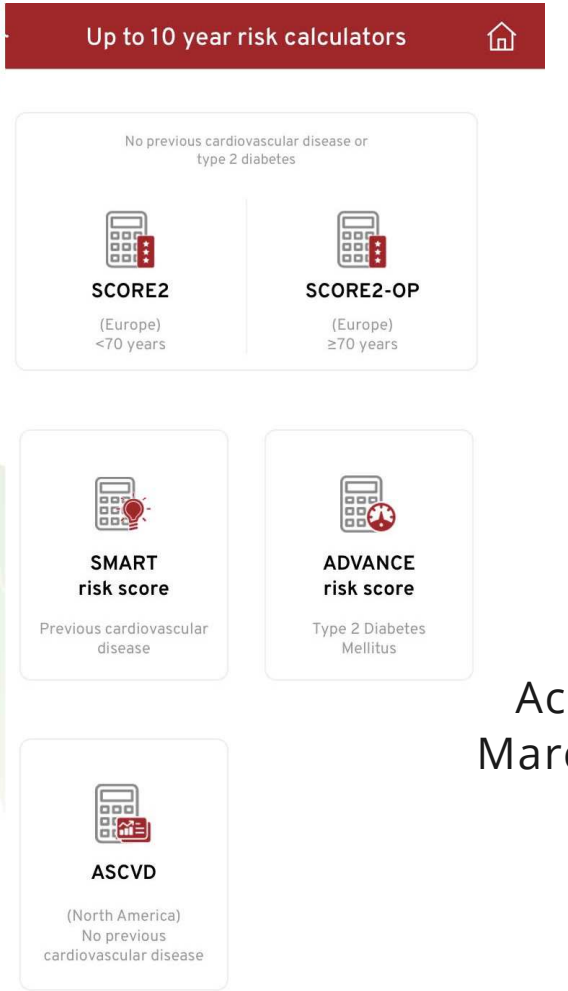


AIM
LDL-c target according to individual cardiovascular risk

Material and methods



2021 ESC Guidelines on cardiovascular disease prevention in clinical practice



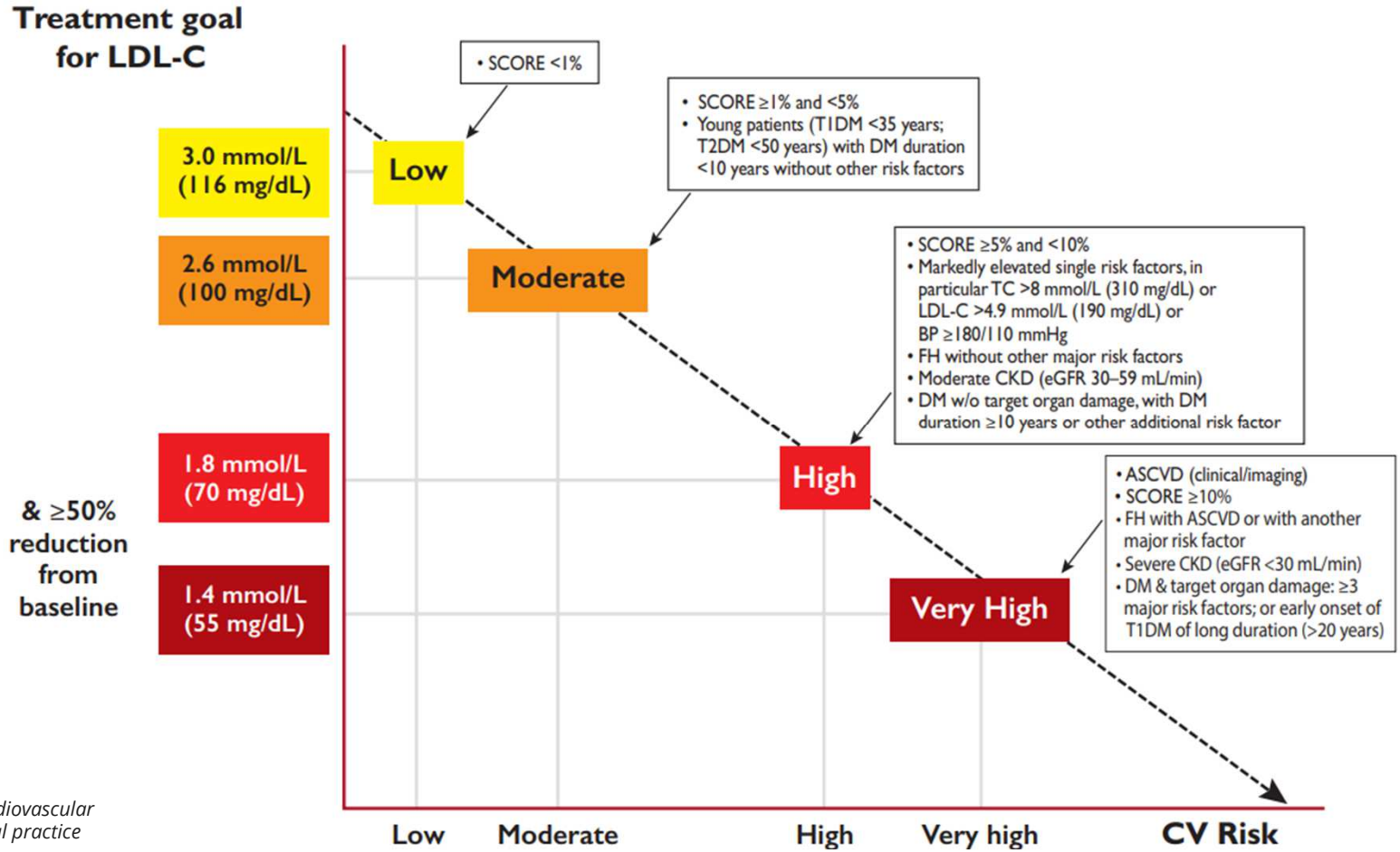
STUDY DESIGN

Retrospective
Observational
Single-center

POPULATION

PLWH > 40 years old
Accessing our clinic from
March 2022 to March 2023

Material and methods



2021 ESC Guidelines on cardiovascular disease prevention in clinical practice

Results

Characteristics of population	Overall n = 1,404	Not high risk n = 448	High risk n = 519	Very high risk n = 311
Female sex at birth, n (%)	359 (25.5)	188 (42)	120 (23)	64 (20.6)
Age, median years (IQR)	56 (49-61)	49 (45-55)	57 (53-60)	64 (59-72)
Mode of HIV acquisition, n (%)				
MSM	705 (50.2)	167 (37.3)	163 (31.4)	85 (27.3)
HE	414 (29.5)	230 (51.3)	242 (46.6)	132 (42.4)
IDU	251 (17.9)	41 (9.2)	106 (20.4)	81 (26)
Other	34 (2.4)	10 (2.2)	8 (1.5)	13 (4.2)
Ethnicity, n (%)				
Caucasian	1,202 (85.6)	352 (78.6)	463 (89.2)	288 (92.6)
African	68 (4.8)	27 (6)	19 (3.7)	14 (4.5)
Hispanic	122 (8.7)	61 (13.6)	34 (6.6)	8 (2.6)
Asian	12 (0.8)	8 (1.8)	3 (0.6)	1 (0.3)
Current smoking, n (%)	565 (40.2)	109 (24.3)	253 (48.7)	163 (52.4)
BMI, median (IQR)	25 (22-27)	24 (22-26)	25 (23-27)	25 (23-28)

Characteristics of population	Overall n = 1,404	Not high risk n = 448	High risk n = 519	Very high risk n = 311
Atherosclerotic CVD, n (%)	88 (6.3)	0 (0)	0 (0)	88 (28.3)
Type 2 diabetes, n (%)	97 (6.9)	7 (1.6)	36 (6.9)	47 (15)
Moderate CKD, n (%)	110 (7.8)	0 (0)	47 (9.1)	55 (17.7)
Severe CKD, n (%)	11 (0.8)	0 (0)	0 (0)	11 (3.5)
Antihypertensive therapy	435 (31%)	60 (13.4)	169 (32.6)	174 (55.9)
Antiplatelet therapy	183 (13%)	9 (2)	60 (11.6)	105 (33.8)
CD4, cells/µL, median (IQR)	720 (538-918)	710 (558-886)	740 (549-950)	703 (496-885)
HIV-RNA < 50 copies/mL	1,352 (96.3)	428 (95.5)	499 (96)	304 (97.7)
Current ART regimen, n (%)				
Dual therapy INSTI-based	513 (36.5)	181 (40.4)	185 (35.6)	104 (33.4)
Dual therapy PI-based	67 (4.8)	10 (2.2)	27 (5.2)	23 (7.4)
Triple therapy INSTI-based	455 (32.4)	139 (31)	167 (32.2)	104 (33.4)
Triple therapy PI-based	98 (7)	24 (5.4)	43 (8.3)	26 (8.4)
Triple therapy NNRTI-based	192 (13.7)	72 (16.1)	64 (12.3)	36 (11.6)
Other	79 (5.6)	22 (4.9)	32 (6.2)	18 (5.8)
Abacavir containing ART	115 (8.2)	40 (8.9)	40 (7.7)	23 (7.4)

Table 1: *Characteristics of the study population*

Results

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Asian	12 (0.8)	8 (1.8)	3 (0.6)	1 (0.3)
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Dual therapy PI-based	67 (4.8)	10 (2.2)	27 (5.2)	23 (7.4)
Triple therapy INSTI-based	455 (32.4)	139 (31)	167 (32.2)	104 (33.4)
Triple therapy PI-based	98 (7)	24 (5.4)	43 (8.3)	26 (8.4)
Triple therapy NNRTI-based	192 (13.7)	72 (16.1)	64 (12.3)	36 (11.6)
Other	79 (5.6)	22 (4.9)	32 (6.2)	18 (5.8)
Abacavir containing ART	115 (8.2)	40 (8.9)	40 (7.7)	23 (7.4)

Table 1: *Characteristics of the study population*

Results

Serum lipids and LLT	Overall n = 1,404	Not high risk n = 448	High risk n = 519	Very high risk n = 311
Serum lipids availability, median (IQR)	1,294 (92.2)	448 (100)	515 (99.2)	303 (97.4)
TC (n=1,320)	192 (167-216)	196 (173-218)	196 (172-224)	185 (155-212)
HDL (n=1294)	46 (38-55)	52 (43-61)	45 (38-53)	41 (36-50)
TG (n=1318)	108 (81-155)	91 (69-126)	115 (89-161)	124 (90-172)
LDL-c (n=1,276)	116 (96-141)	120 (103-140)	120 (99-145)	118 (96-144)
Lipid-lowering therapy, n (%)	516 (36.8)	106 (23.7)	203 (39.1)	177 (56.9)
Statin	411 (29.3)	76 (17)	153 (29.5)	156 (50.2)
High intensity statin	75 (5.3)	9 (2)	26 (5)	36 (11.6)
Rosuvastatin	288 (20.5)	52 (11.6)	108 (20.8)	106 (34.1)
Atorvastatin	77 (5.5)	15 (3.3)	30 (5.8)	29 (9.3))
Fibrates	46 (3.3)	6 (1.3)	21 (4)	17 (5.5)
Ezetimibe	46 (3.3)	6 (1.3)	21 (4)	17 (5.5)
Supplements	48 (3.4)	10 (2.2)	15 (2.9)	22 (7.1)
Combination LLT, n (%)	85 (6.1)	8 (1.8)	34 (6.6)	39 (12.5)
Previous statin-therapy, n (%)	104 (7.4)	23 (5.1)	50 (9.6)	28 (9)

Table 2. *Lipid-lowering therapy and serum lipids profile of the study population.*

Results

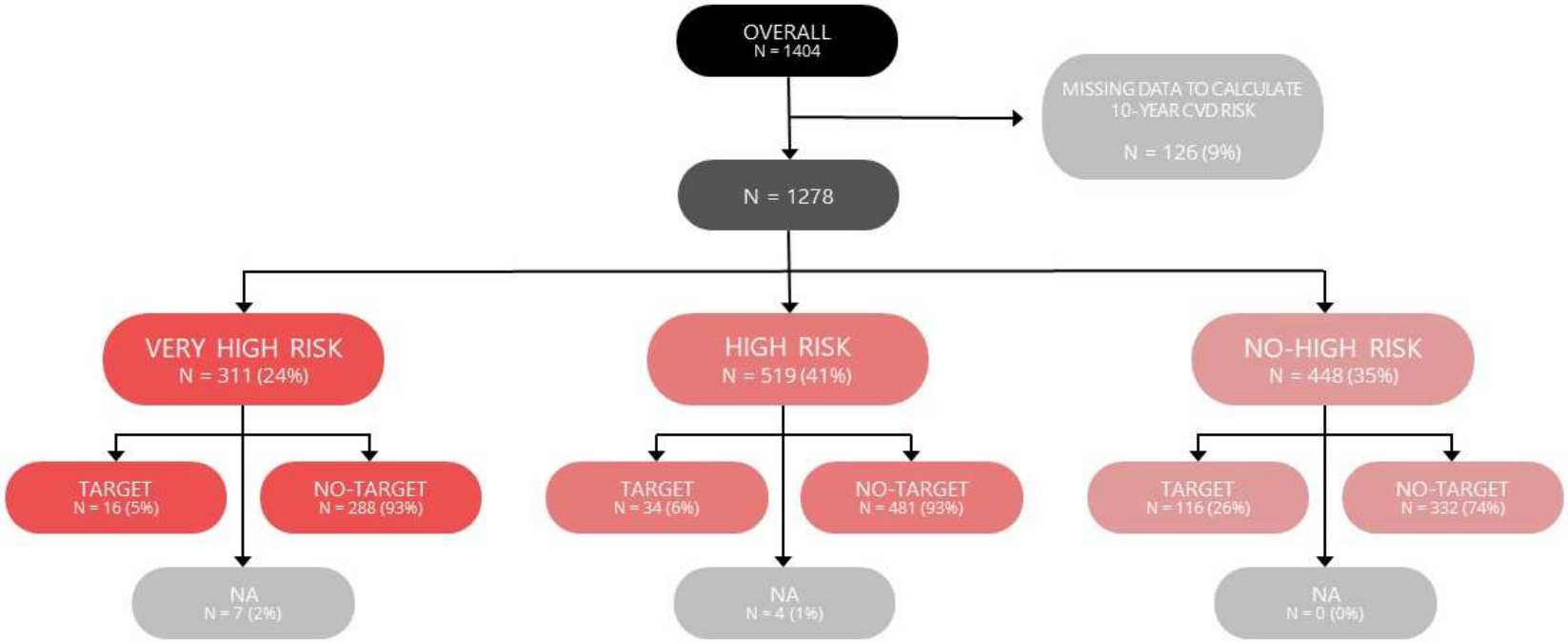

***Figure 1**: LDL-c target achievement according to individual cardiovascular risk*

Results

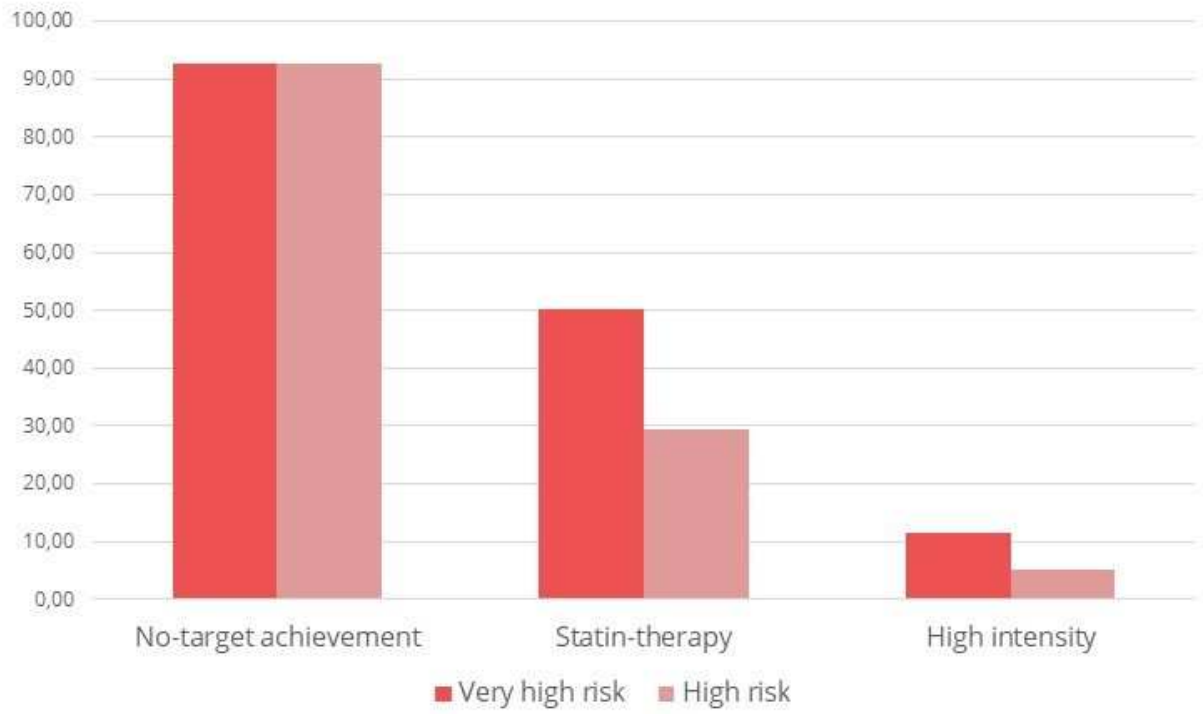

***Figure 2**: Statin prescription in very high risk and high risk subjects not on target*

Conclusions

We are far away from reaching an adequate LDL-c target especially in VHR and HR subjects

Urgent interventions are warranted

Ringraziamenti

Dott.ssa Beatrice Caloni
Dott. Andrea Poloni
Dott. Simone Pagano
Dott.ssa Martina Laura Colombo
Dott.ssa Martina Beltrami
Dott. Giacomo Casalini
Dott.ssa Cristina Gervasoni
Dott.ssa Anna Lisa Ridolfo
Dott. Andrea Giacomelli
Prof. Spinello Antinori

GRAZIE PER L'ATTENZIONE