

Cardiovascular disease risk according to SCORE2 and the potential need for cholesterol and blood pressure lowering therapy in persons with HIV without established cardiovascular disease, Croatia

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BACKGROUND: The European Society for Cardiology (ESC) and European AIDS Clinical Guidelines (EACS) recommend assessing cardiovascular disease (CVD) risk using the SCORE2 algorithm (1,2). The SCORE2 is applied to CVD-free, apparently healthy persons. **We examined the distribution of CVD risk in people living with HIV (PLWH) 40 to 69 years old. We assessed the proportions of those who could be eligible and are using lipid-lowering therapy (LLT) according to the ESC and 2024 interim EACS guidelines.**

METHODS: Included were all PLWH seen at the Outpatient HIV Department in the period 2019 to 2023 who were of European origin and had available data for the SCORE2 calculation. We excluded individuals with previously known atherosclerotic CVD, diabetes mellitus, or chronic kidney disease with eGFR < 60 ml/min/1.73 m², and pregnant women. We used the SCORE2 algorithm for countries with a high CVD risk and categorized study participants based on the ESC and EACS criteria. (1,2)

RESULTS: Of 1116, PLWH of European origin, 1000 had available data for SCORE2 determination and 791 were evaluated (Figure 1). The median age was 46.3 (Q1-Q3, 41.7-52.6) years, 658 (83.2%) had an HIV-1 RNA < 50 c/ml, and 694 (87.7%) had < 200 c/ml. The median 10-year risk of CVD according to SCORE2 was 3.9 (Q1-Q3, 2.4-6.1), and according to the ESC classification 292 (36.9%) were classified as a low-moderate risk, 427 (54.0%) as high-risk, and 72 (9.1%) as very high risk. 279 (35.3%) had a SCORE2 ≥ 5% a level at which EACS guidelines indicate or recommend LLT (Figure 2) (2). All of those with a high and very high risk had LDL levels above optimal thresholds, and 34/791 (4.3%) had below 2.6 mmol/l. The proportion of individuals with blood pressure ≥ 140/90 mmHg was 16.4% (130 of 791). Blood pressure-lowering therapy was administered to 12.7% (84 of 661) of those with blood pressure below 140/80 mmHg and 35.4% (46 of 130) of those with blood pressure at or above 140/90 mmHg.

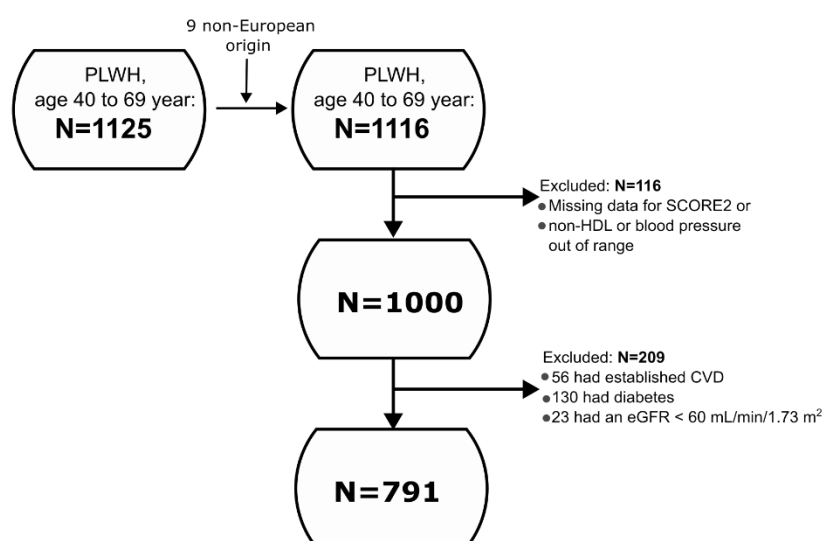


Figure 1. Selection of participants for the determination of SCORE2 cardiovascular risk, Croatia, 2019 to 2023.

*ESC guidelines generally do not recommend lipid lowering therapy to persons at low/moderate risk, treatment should be considered for those with a high risk and is recommended for those at very high risk. The 2024 interim EACS guidelines indicate lipid lowering therapy for those with a SCORE2 ≥ 10%, recommend for those with 5 to 10% and consider for those < 5%.

**In Croatia, medications (including LLT and antihypertensive drugs) that are recommended by specialist are prescribed by primary care physicians based on their own judgment.

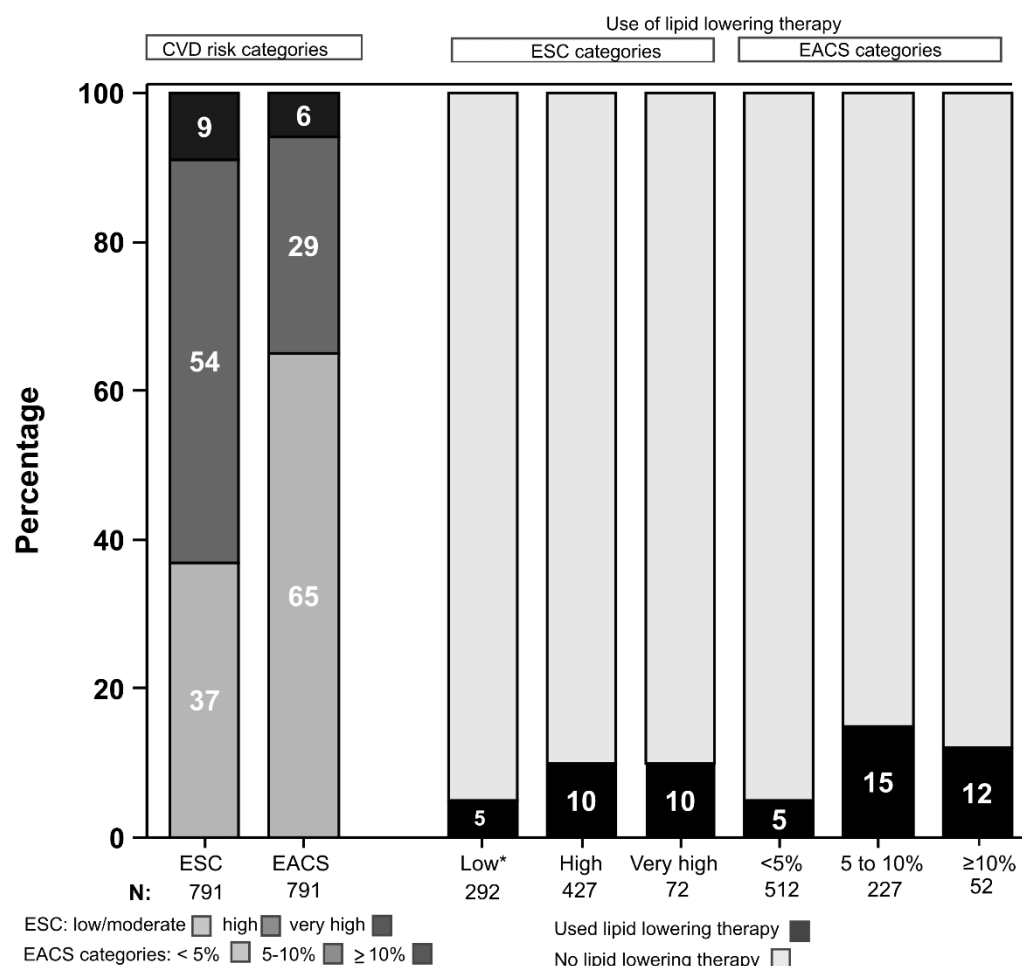


Figure 2. Distribution of SCORE2 risk categories according to ESC and EACS, and the proportion receiving lipid-lowering therapy (LLT) in PLWH in Croatia**

CONCLUSION: Over one-third of apparently healthy PLWH had indicated or recommended lipid-lowering therapy by EACS guidelines. **Lipid-lowering and antihypertensive therapy were largely underused in PLWH in Croatia.**

References:

1. Visseren FLJ, Mach F, Smulders YM, Carballo D, Koskinas KC, Böck M, et al. 2021 ESC Guidelines on cardiovascular disease prevention in clinical practice. Eur Heart J. 2021;42:3227-3337.
2. EACS. Interim guidance on the use of statin therapy for the primary prevention of cardiovascular disease in people with HIV. June 2024. <https://www.eacsociety.org/guidelines/interim-guidance/>. Accessed June 30, 2024.