

People with HIV at high cardiovascular risk were undertreated with statins

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on behalf of HIV HEART AGING Study

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BACKGROUND

Hypercholesterolemia is a relevant and modifiable risk factor for cardiovascular (CV) events¹. Latest data from the REPRIEVE study suggested the use of statins already in cases of low to moderate CV risk in People with HIV (PWH) showing a decrease in CV events in the statin-treated study group². This study is intended to assess the implementation of the guideline-based treatment of hypercholesterolemia and its effectiveness in PWH in a real-life cohort^{3,4}.

METHODS

The HIV-HEART Ageing (HIVH) cohort is a prospective study assessing CV risk of PWH in the German Ruhr area since 2004. PWH without prior major adverse CV events were examined at the 10 years follow-up (10 YFU) and stratified into four risk groups based on the 2019 German guidelines⁴ for dyslipoproteinemia using the SCORE-risk table (very high: $\geq 10\%$, high: $5\text{--}<10\%$, medium: $1\text{--}<5\%$, low: $<1\%$). Statin therapy indication was determined by LDL cut-off values for each risk group. PWH with statin therapy indications^{3,4}, those treated, and achievements of therapy goals were assessed. The results were compared using the ASCVD score for risk stratification². Finally, the use of statins in the risk groups was compared between the 10-year and the 12.5-year follow-ups.

RESULTS

818 PWH were included in the analysis (basic characteristics see table 1). 64 participants had a reported statin therapy. Participants were classified according to SCORE risk groups, with 8.6% in the highest risk group, 19.1% in “high risk”, 49.9% in “medium risk”, and 22.5% in the “low risk” group. Of the 754 participants without statin intake, 179 (23.7%) had an indication for statin therapy according to German guidelines based on SCORE risk groups. In higher-risk groups, the proportion of PWH with an indication for statins was especially high (95.7% in “high risk” and 83.3% in the highest risk group). Compared with the data from the 12.5-year follow-up, the rate of PWH treated with statins is increasing (figure 1). This trend is particularly evident in the very high risk group (25.4% to 51.4%) and the high risk group (17.7% to 21.7%). Among the 64 patients on statins, only 8 (12.5%) achieved the German guidelines recommended, risk-adapted LDL therapy targets after 2.5 years (figure 2). Less than 50% of all PWH with statin use have a sufficient reduction of LDL (by 40% of the baseline values). Using the ASCVD score for risk stratification, even 57.1% of those not treated had an indication for statin therapy.

Hypercholesterolemia was a highly prevalent cardiovascular risk factor in PWH.

PWH with a high cardiovascular risk were undertreated with statins despite indication and therapy targets were rarely met.

Table 1: risk group specific results at 10-year follow-up

PWH [missings] n = 818	CV-SCORE risk			
	VHR $\geq 10\%$ n=70 (8.6%)	HR $\geq 5\text{--}10\%$ n=156 (19.1%)	MR $\geq 1\text{--}5\%$ n=408 (49.9%)	LR $<1\%$ n=184 (22.5%)
Sex male n (%) [0]	67 (95.7%)	150 (96.2%)	366 (89.7%)	112 (60.9%)
Age years Median (IQR) [0]	63.5 (10.0)	56.0 (7.0)	49.0 (7.0)	36.0 (10.5)
Duration since diagnosis of HIV infection years Median (IQR) [10]	14.6 (11.7)	14.0 (8.7)	12.4 (9.9)	8.8 (8.0)
CD4/CD8 Ratio Median (IQR) [2]	0.9 (0.6)	0.8 (0.5)	0.9 (0.6)	0.9 (0.5)
HIV-RNA <50 copies/ml n (%) [0]	67 (95.7%)	149 (95.5%)	382 (93.6%)	172 (93.5%)
LDL mg/dl Median (IQR) [13]	145.0 (45.0)	141.0 (49.0)	131.0 (49.0)	112.0 (39.0)
Diagnosis of hyperlipidaemia n (%) [0]	57 (81.4%)	111 (71.2%)	230 (56.4%)	58 (31.5%)
Indication for statin use [0] ^{a,b}	67 (95.7%)	130 (83.3%)	42 (10.3%)	4 (2.2%)
No statin use despite indication [0]	50 (74.6%)	107 (82.3%)	19 (45.2%)	3 (75.0%)
Statin use [0]	17 (25.4%)	23 (17.7%)	23 (54.8%)	1 (25.0%)

^a: PWH with ongoing statin therapy were treated as having an indication

^b: in “low risk” groups the indication for statin therapy results from elevated LDL

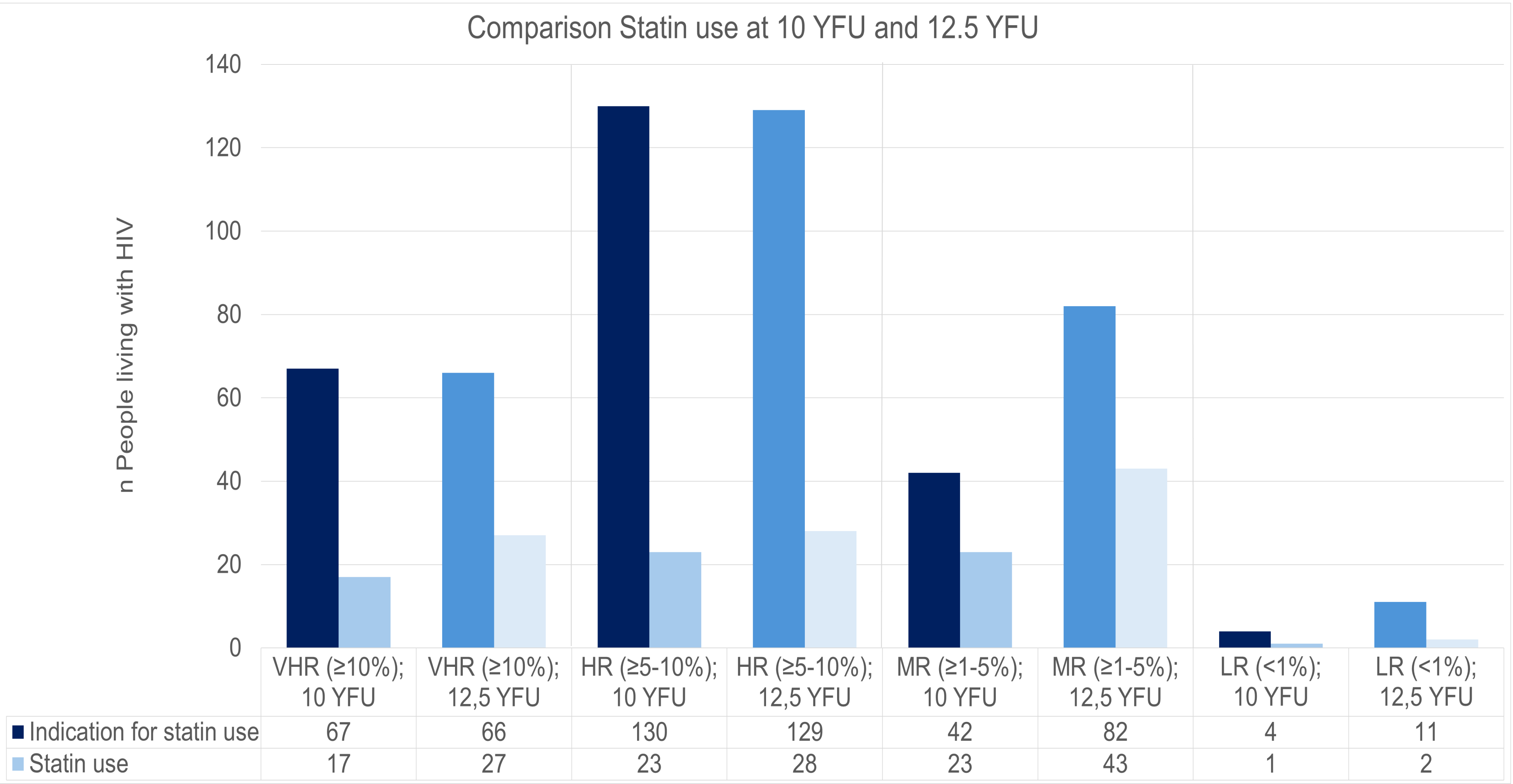


Figure 1: Comparison of Statin use at 10 YFU and 12.5 YFU

Presentation of PWH with indication for statin therapy divided into the four risk groups in the 10 and 12.5 year follow-up. The proportion of those who actually receive statin therapy is also shown.

CONCLUSIONS

This cohort demonstrates high CV risk and concerning low rates of statin therapies in PWH with elevated CV risk according to SCORE^{3,4}. If the ASCVD score was used to indicate statin therapy, the deficit of statin therapy was even more prevalent. Data from the later measurement date show a tendency towards a better, but still insufficient rate of statin use. Moreover, LDL therapy targets in those receiving statins were rarely met³. Even though LDL targets are often described as idealized, a more consistent therapy of hypercholesterolemia is essential in high-risk patients with regular medical consultations such as PWH.

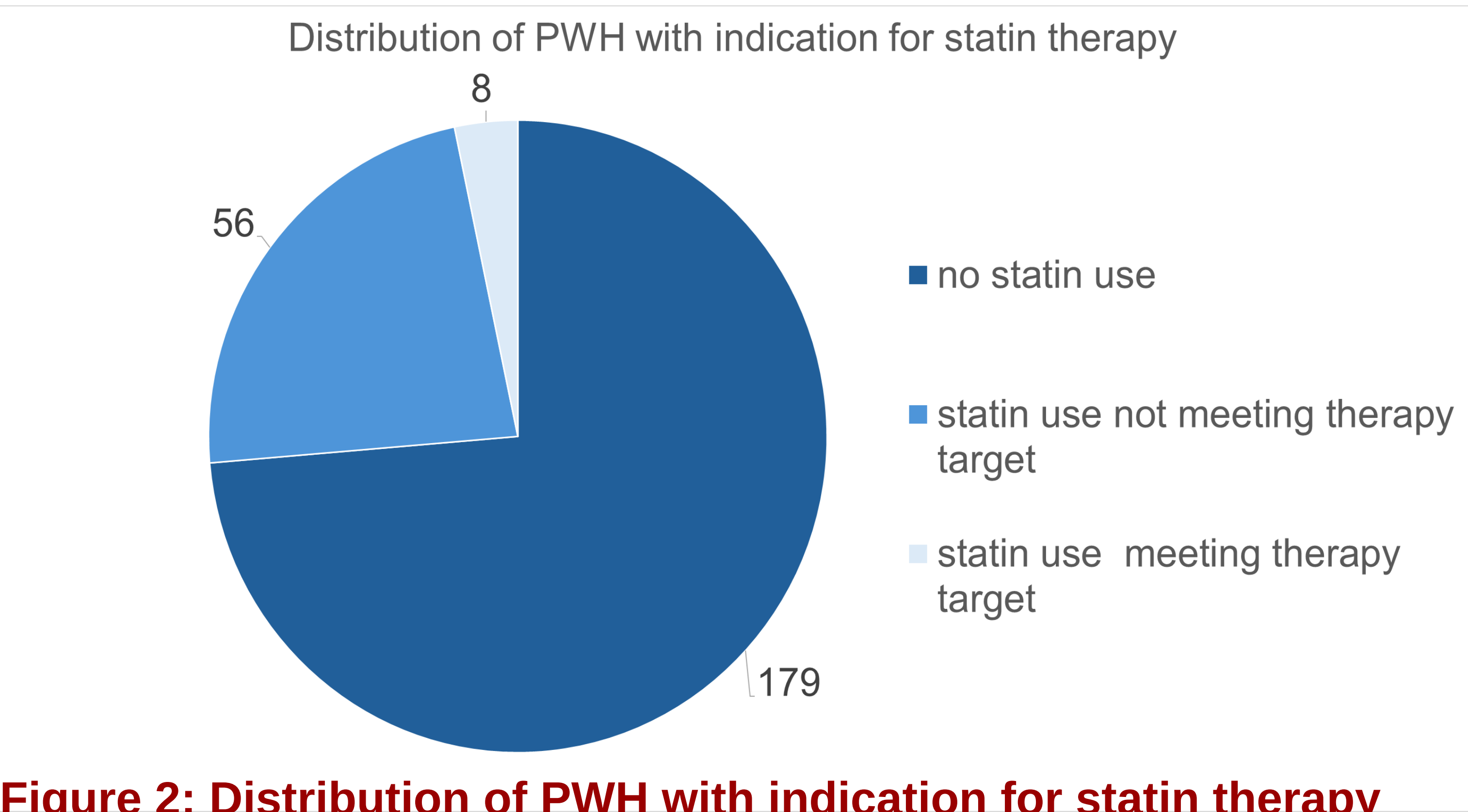


Figure 2: Distribution of PWH with indication for statin therapy

The distribution of PWH with an indication for statin therapy is shown independently of the risk group; the proportion of PWH with statin therapy is emphasised. Of these, the proportion of those achieving the therapy goal after 2.5 years is shown.

ADDITIONAL KEY INFORMATION

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Abbreviations

VHR = very high risk; HR = high risk; MR = Medium risk; LR = Low risk; IQR = Interquartile range; LDL = low density lipoproteins YFU = Year-Follow-Up