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# Effectiveness, Adherence, and Safety of Evolocumab in a Swiss Multicenter Prospective Observational Study

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INTRODUCTION
The aims of this study were to describe patient characteristics, lipid parameters, lipid-lowering drug use, and safety of patients receiving evolocumab in a real-world clinical setting.

METHODS
We conducted a 1-year multicenter observational study of adults using evolocumab with confirmed atherosclerotic cardiovascular disease (CVD) or at high cardiovascular risk, and elevated LDL-C despite maximally tolerated statin doses. An e-health application optionally supported patient management. The primary outcome was change in lipid parameters over time. The secondary outcomes included evolocumab safety.

RESULTS
Of 100 participants, 81% had pre-existing CVD, 71% self-reported statin-related muscle symptoms, 44% received statins. All patients received evolocumab, 65% were PCSK9i pre-treated at baseline. PCSK9i-naïve patients achieved a mean LDL-C reduction of 60% within 3 months of evolocumab treatment, which was maintained thereafter; 74% achieved LDL-C < 1.8 mmol/L at least once during observation, 69% attained < 1.4 mmol/L. In PCSK9i pre-treated patients, LDL-C remained stable throughout; 79% and 74% attained < 1.8 mmol/L and < 1.4 mmol/L, respectively, at least once. Goal attainment was higher with any combination of evolocumab, statin, and/or ezetimibe. Overall, 89% self-reported full evolocumab adherence. Treatment-emergent adverse events (TEAE) were reported in 30% of patients, two serious TEAEs occurred in one patient; three patients discontinued evolocumab because of TEAEs.

CONCLUSION
In real-world clinical practice, evolocumab was mainly used in patients with statin intolerance and pre-existing CVD. In this population, adherence to evolocumab and low LDL-C levels were maintained over 1 year, with better LDL-C goal achievement in patients using evolocumab in combination with

other lipid-lowering drugs. Safety of evolocumab was similar to that documented in randomized controlled trials.

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