

First Croatian Prospective Peripheral Artery Disease Registry (CRO-PAD): What have we learned in the past 10 years?

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Aim: Patients with peripheral artery disease (PAD) are at very high risk of cardiovascular events.¹⁻³ The first Croatian Prospective Peripheral Artery Disease Registry (CRO-PAD) was created in 2010, with the aim to collect, organize and present data about patients with PAD. The purpose was to evaluate risk factors, prognosticators, longitudinal outcomes, and therapeutic development in order to improve patients' healthcare and disease outcomes.

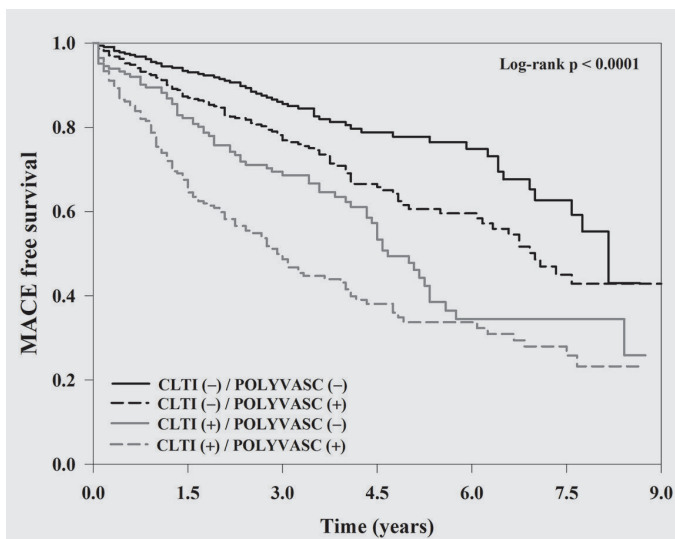


FIGURE 1. Cumulative major adverse cardiovascular events (MACE) free survival in 1084 symptomatic PAD patients according to polyvascular involvement (POLYVASC) and chronic limb threatening ischemia (CLTI).

Patients and Methods: The occurrence of major adverse cardiovascular events (MACE), defined as composite endpoint of acute myocardial infarction, stroke, and death was assessed in 1084 symptomatic PAD patients admitted to the University Hospital between January 2010 and January 2020 (65% men, age 70±10 years). Multivariate Cox regression analysis adjusted for age, gender, traditional cardiovascular risk factors, polyvascular disease, chronic limb threatening ischemia (CLTI), atrial fibrillation (AF), anemia, statin treatment, and impaired renal function was applied to assess the independent predictors of MACE.

Results: During median follow-up period of 44 months (interquartile range, 23-59 months), 370 patients (34%) experienced MACE. Compared to patients without MACE, these patients were older, more likely to have diabetes, hypertension, CLTI, polyvascular disease, AF, anemia, and renal impairment. In multivariate regression analysis, age (HR 1.03, 95% CI 1.02-1.04), polyvascular disease (HR 1.42, 95% CI 1.15-1.77), CLTI (HR 1.91, 95% CI 1.54-2.36), AF (HR 1.54, 95% CI 1.18-2.01) and anemia (HR 1.65, 95% CI 1.31-2.06) remained independent predictors of MACE. Patients with both polyvascular involvement and CLTI were four times more likely to experience MACE compared to those with PAD alone (**Figure 1**).

Conclusion: Polyvascular involvement, critical limb ischemia, anemia, and AF were independent predictors of MACE in symptomatic PAD patients during long-term follow-up.

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LITERATURE

- Vrsalović M, Vučur K, Car B, Krčmar T, Vrsalović Presečki A. C-reactive protein, renal function, and cardiovascular outcome in patients with symptomatic peripheral artery disease and preserved left ventricular systolic function. *Croat Med J.* 2015 Aug;56(4):351-6. <https://doi.org/10.3325/cmj.2015.56.351>
- Vrsalović M, Vučur K. Diabetes and Critical Limb Ischemia: The Deadly Duo in Patients with Symptomatic Peripheral Artery Disease. *Acta Clin Croat.* 2016 Jun;55(2):240-6. <https://doi.org/10.20471/acc.2016.55.02.09>
- Vrsalović M, Presečki AV. Atrial fibrillation and risk of cardiovascular events and mortality in patients with symptomatic peripheral artery disease: A meta-analysis of prospective studies. *Clin Cardiol.* 2017 Dec;40(12):1231-1235. <https://doi.org/10.1002/clc.22813>