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### Risk of cardiovascular events in a hypertensive population in primary care

Stéphanie Giezendanner(1), K Henny-Fullin(2), D Buess(2), A Handschin(2), P Tschudi(1), T Dieterle(2), A Zeller(1)

(1) Centre for Primary Health Care, University of Basel

(2) Medizinische Universitätsklinik, Kantonsspital Baselland, Liestal

Corresponding author: Dr Stéphanie Giezendanner, Centre for Primary Health Care, University of Basel, Liestal, Switzerland. E-mail: stephanie.giezendanner@unibas.ch

**Background and Aim:** Data on characteristics and outcomes of patients with hypertension managed in primary care in Switzerland are limited. We aimed to describe the association of known risk factors with cardiovascular events in patients with hypertension.

**Method:** A prospective observational longitudinal cohort recruited between 2006 and 2013 in Swiss primary care. 755 patients with hypertension aged 18 to 103 years (mean= 65, SD =13) from primary care and at least one follow-up visit were analysed. Patients were followed prospectively for up to 6 years. GPs assessed the incidence of cardiovascular events (myocardial infarction, stroke/transient ischemic attack, new-onset coronary heart disease, revascularization, cardiac failure, new-onset arteriosclerosis). Multivariate survival models were adjusted for known baseline cardiovascular risk factors, such as age, gender, BMI, smoking, diabetes mellitus (DM), dyslipidemia, cardiovascular disease, glomerular filtration rate (GFR), systolic and diastolic office blood pressure and left ventricular hypertrophy (LVH). Cox proportional hazards models were used to relate time to cardiovascular events to patients' clinical and demographic characteristics.

**Results:** We observed 55 cardiovascular events during a mean follow-up period of 2.11 years. Multivariate Cox proportional hazards analyses revealed that the number of comorbidities (HR: 1.45 per additional comorbidity, 95% CI 1.03-2.04), COPD (HR: 5.05, 95% CI 2.15-11.84), DM (HR: 1.89, 95% CI 1.06-3.38), LVH (HR: 2.27, 95% CI: 1.12-4.61), nicotine withdrawal (HR: 3.78, 95% CI:1.32-10.81), the use of insulin (HR: 3.34, 95% CI: 1.22-9.17), the use of coumarine (HR: 2.60, 95% CI: 1.21-5.59) and GFR (HR: 4.12 comparing 30-60 mL/min with >90 mL/min, 95% CI: 1.34-12.7) are independent predictors of cardiovascular events.

**Conclusions:** Besides the known risk factors, the analyses showed that the uses of insulin and coumarine as well as COPD and -unexpectedly- nicotine withdrawal were independent predictors of cardiovascular events in hypertensive primary care patients in Switzerland.