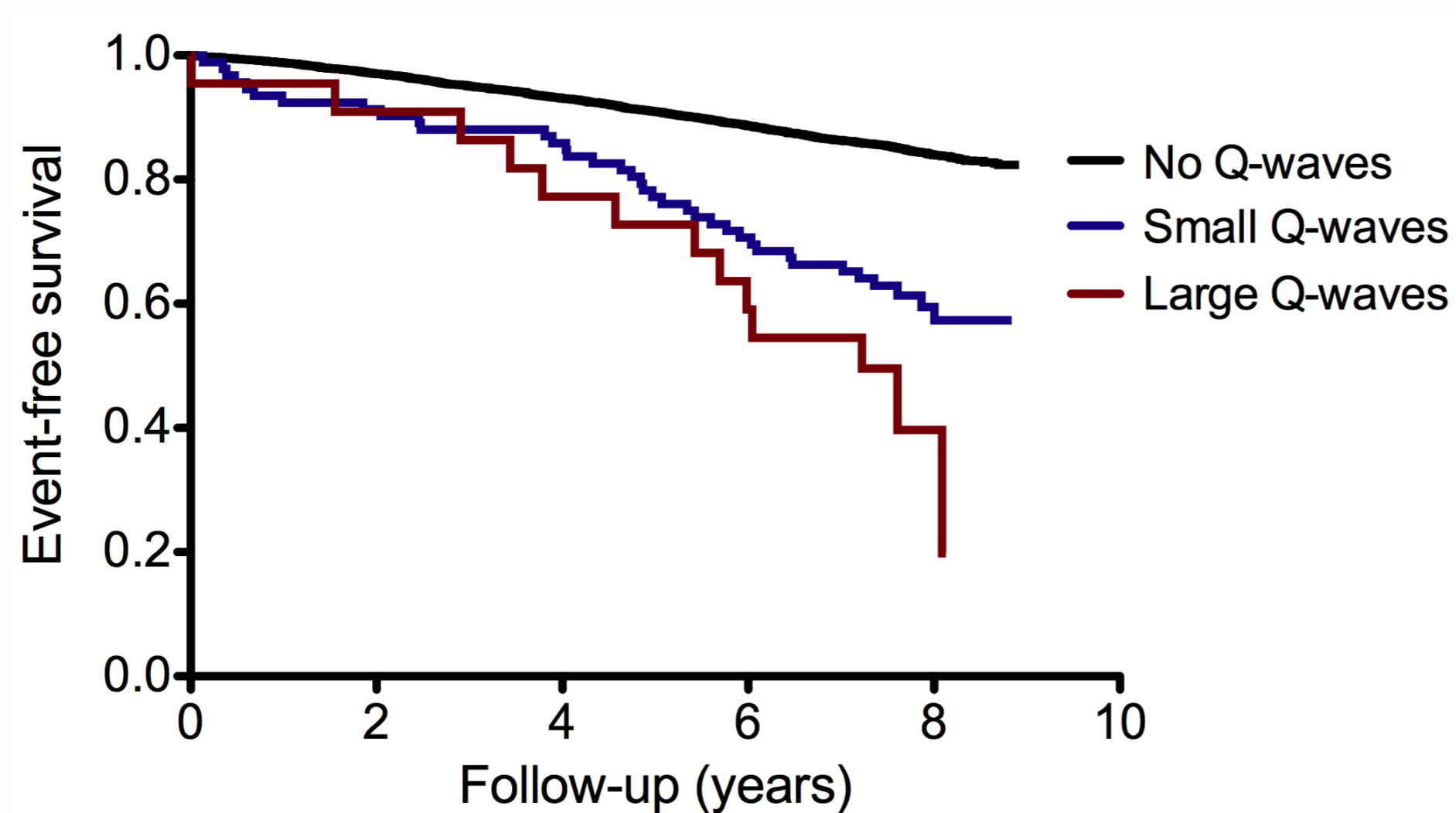
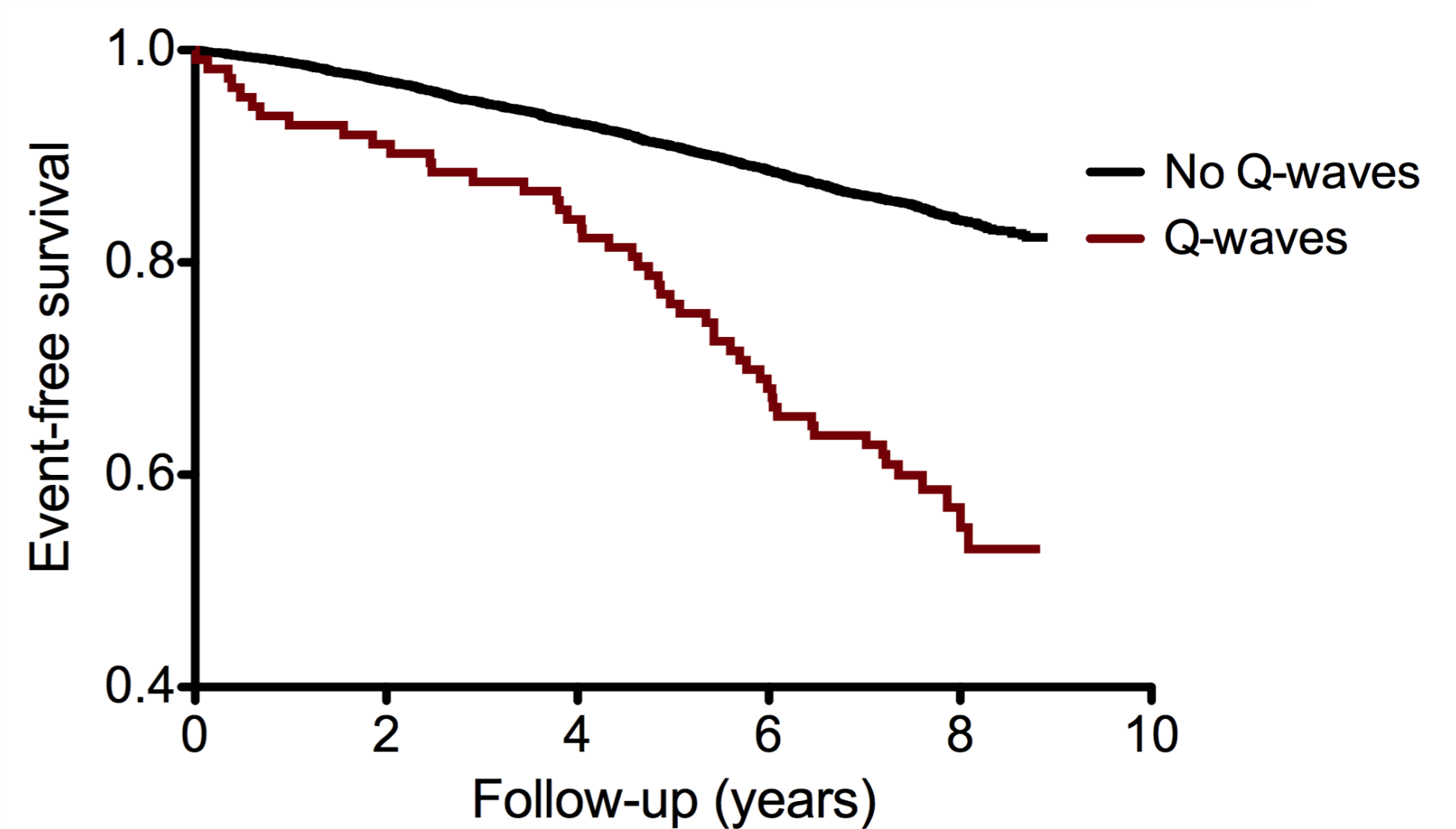


Prognostic significance of electrocardiographic Q-waves in a low risk population

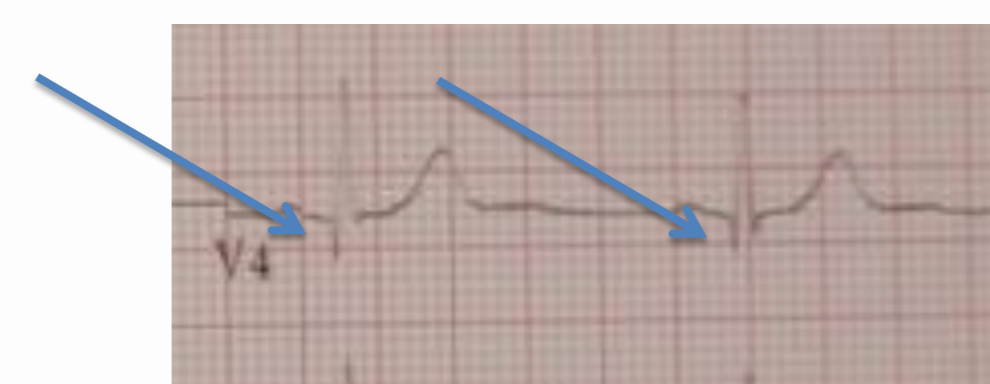
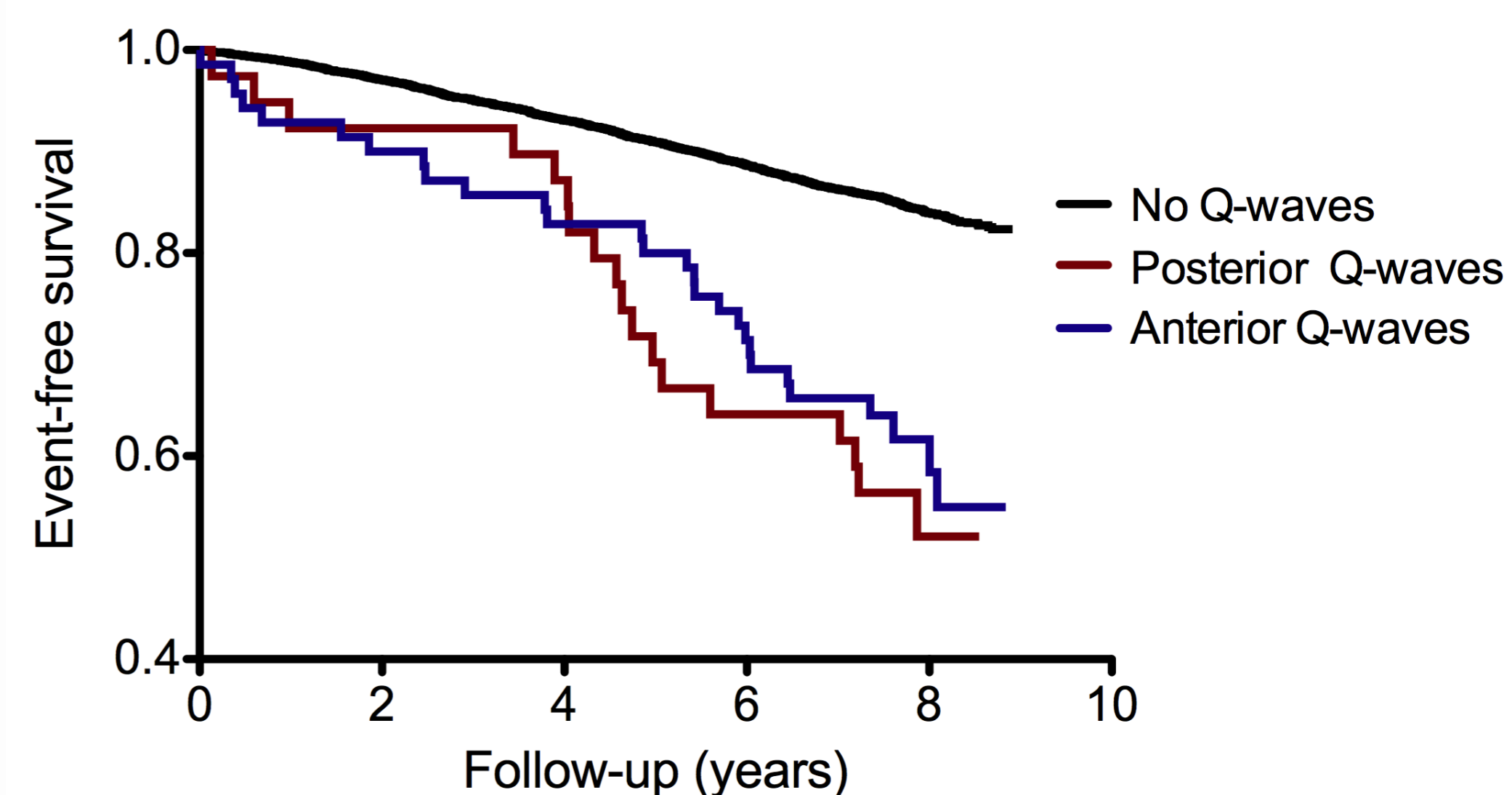
Peter Godsk, MD, Jan Skov Jensen, MD, PhD, DMSc, Prof, Steen Z. Abildstrøm, MD, PhD, Merete Appleyard, Sune Pedersen, MD, PhD, Rasmus Mogelvang, MD, PhD

Aims. In individuals without known heart disease, electrocardiographic Q-waves predict a poor prognosis. We aimed to examine whether prognostic information can be derived from the size and location of Q-waves in persons from the general population without known ischemic heart disease (IHD) or heart failure (HF).



Methods. Electrocardiograms of 5,381 persons without known IHD or HF from the 4th Copenhagen City Heart Study were reviewed and Q-waves were classified according to their size and location. Multivariate Cox proportional hazards regression models were used to examine the associations of Q-waves adjusted for age, hypertension, diabetes and estimated glomerular filtration rate with the risk of the combined end-point of death and hospitalization for IHD

Results. During a median of 7.8 years of follow-up, 1,003 persons reached the combined end-point. 114 (2.1%) had pathological Q-waves of whom 44 % suffered from an event compared to 18 % from the control group, $p < 0.001$. Persons with hypertension, diabetes and impaired renal function were more likely to have Q-waves. Even small Q-waves (i.e. Minnesota code 1.2.x-1.3.x) were associated with a poor prognosis, hazard ratio (HR) 1.4 (95%-CI: 1.0-2.0; $p < 0.05$), though not as grave as large Q-waves (i.e. Minnesota code 1.1.x) HR 2.8 (95%-CI: 1.6-5.0; $p < 0.001$). Conversely, there was no difference in the outcome of patients with anteriorly HR 1.6 (95%-CI: 1.1-2.4) vs. posteriorly HR 1.5 (95%-CI: 0.9-2.4) located Q-waves ($p = 0.85$).



Small Q-waves, i. e. Minnesota Code 1.3.1

Conclusions. In the general population without known IHD or HF, even small Q-waves in the electrocardiogram are associated with a poor prognosis.