Background The age-adjusted incidence of cutaneous melanoma (CM) in the Nordic countries has increased during the last 60 years. In Europe, the legislation of five out of 11 surveyed countries acknowledges CM as an occupational disease (Ullrich et al., 2016). To our knowledge, population-based studies with a prospective design have not yet described the variation in the relative risk of CM among different occupational categories.

Aim 1. To describe the variation in the relative risk of CM according to occupational categories with outdoor, mixed, and indoor work, as well as socioeconomic status (SES).

2. To evaluate trends across periods.

Methods Historical prospective cohort study based on record linkages between census data for 15 million people and cancer registry data from 1961 to 2005 (Nordic Occupational Cancer Project, http://astra.cancer.fi/NOCCA). Standardised incidence ratios (SIR) were estimated for 53 occupational categories classified according to indoor, outdoor and mixed work and socioeconomic status.

Results During follow-up of 385 million person-years, there were 83,898 incident cases of CM. Statistically significant SIRs of CM were found among occupational categories with indoor work for male workers (1.09) and the highest socio-economic status for men (1.36) and women (1.31). Occupational categories with outdoor work for both men (0.79) and women (0.92), and the lowest socio-economic status showed lowest SIRs for both sexes (men: 0.68; women: 0.97). The SIR pattern was similar in all periods for occupational categories with outdoor, mixed and indoor work. Findings were consistent between the different Nordic countries.

Conclusion This historical prospective cohort study provides evidence of an increased relative risk of CM amongst occupational categories with indoor work for men, and highest SES for both sexes.