Introduction. Although considered as a first-group carcinogen, indoor tanning is a common practice in Europe. Euromelanoma is a pan-European skin cancer prevention campaign.

Objective. To compare several European countries in terms of prevalence and determinants of sunbed use.

Materials and Methods. Participants in the Euromelanoma campaigns filled in questionnaires containing demographic and risk factors, including type/duration of sunbed use. Multivariate analyses adjusted for age, gender, education, family type, and year of survey were employed to assess factors independently associated with sunbed use in each country.

Conclusions. The main determinants of sunbed use were age (young adults) and gender (females), whereas education and skin type had a less relevant effect. Geographic particularities were found in four regions: Iberian (prevalence ten times higher in Spain than in Portugal), Balkan (prevalence disproportionately higher among women), Baltic (highest prevalence among young adults), and Scandinavian (highest pregnancy among adolescents). These data have public health relevance for future intervention aimed at reducing sunbed use in Europe.

Table 1. Prevalence of sunbed use for the 30 participating countries according to gender, education, and skin type. Regions with statistically significant differences in the prevalence of sunbed use are highlighted in bold. Differences could not be ascertained for Cyprus (all users), with low education and skin type III. Malta (all users) and Moldova (all users) with high education and skin type IV-VIII.

Table 2. Prevalence of sunbed use in the 30 participating countries, according to age group, gender, and skin type. Age groups were compared by means of multivariate models also including gender, education, skin type, and year of survey. *p value refers to the comparison between the <20-year-olds and the ≥25-year-olds. **p value refers to the comparison between the 20-25-year-olds and the ≥35-year-olds. The prevalence was significantly lower in northern, sun-deprived countries: significant correlations were found between sunbed use prevalence and countries’ latitude (p < 0.001) and sunshine (p < 0.002) and Italy and Spain represented exceptions towards excessive exposure (Figure 1). Females displayed higher prevalence than males in all countries. Balkan countries displayed the highest female/male ratios (≥4) (Table 1A). Sunbed use was significantly more prevalent among highly educated participants (11 countries) (Table 1B) and skin type III-VIII (14/30 countries) (Table 1C). Very different prevalence rates were found for Spain (19.3%) and Portugal (2.0%). Scandinavian countries ranked highest in sunbed use among non-age-certain countries, Baltic countries among 20 to 35-year-olds (Figure 1).

Figure 1. Prevalence of use of sunbed in the 30 participating countries. Countries were grouped in tertiles based on the distribution of their prevalence of use.

Figure 4. Geographic particularities of sunbed use in Europe: Iberian particularity, prevalence of ever use was 10 times higher in Spain than in Portugal; Balkan particularity, prevalence of ever use was disproportionately in favor of women; Baltic particularity, the highest prevalence of ever use among young adults; Scandinavian particularity, the highest pregnancy among adolescents.