

## Letter to the Editor

# Malignant Melanoma Mortality in Italy: 1955-1978

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IN ITALY, as in many countries, the mortality rate of malignant melanoma has rapidly increased in the last 20 yr. The time trend of mortality was examined in Italy for the period 1955-1978 and a three-fold increase in mortality rates was observed: in the years 1955-1957 the average mortality rate per year was 0.3 per 100,000 inhabitants whereas in the years 1976-1978 the average annual rate was 0.9 per 100,000 [1].

The number of deaths from malignant melanoma and data on the Italian population were obtained from the Italian Central Statistical Office. Age-adjusted mortality rates were calculated. Direct adjustment was performed using the Italian population of 1975 as a standard. Analysis of mortality according to sex was conducted for the period 1972-1978 only as data on population by sex were not available for previous years.

Age-specific mortality rates for both sexes in the years 1955, 1965 and 1975 are given in Fig. 1. An increasing mortality trend is evident for all age groups. The three years show similar curves, each characterized by a rapid increase until the age of 40 yr, followed by a gentler slope as age increases. Similar results have been reported for many other white populations and are generally attributed to an increase of risk in successive birth cohorts [2-4]. A cohort phenomenon is present in Italy also: melanoma mortality rates by birth cohorts for the two sexes combined (Fig. 2) show that later cohorts have experienced an increased risk of developing the tumour than earlier ones. For the age-class 45-49 yr, in the birth cohort of 1910 the mortality rates was 3.7 per 100,000, and the rate for the same age-class of birth cohorts of 1920 and 1930 were 6.9 and 9.6 respectively.

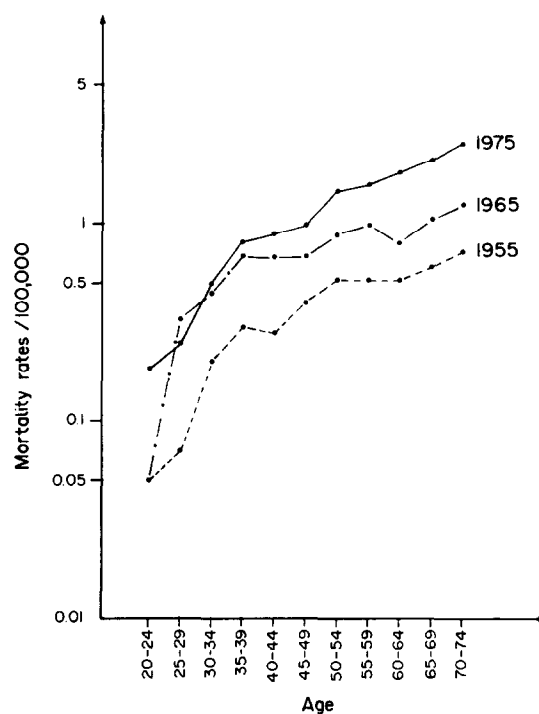


Fig. 1. Age-specific mortality rates from melanoma in Italy in the years 1955, 1965 and 1975. Rates for both sexes combined are given. Ordinates are on a logarithmic scale.

Italy, extending in latitude from 36 to 47°, is an area suitable for the study of the relationship between latitude and mortality from melanoma. This relationship has been widely analysed by many authors [5-8]. A negative correlation between the latitude and both incidence and mortality has been found in North America while in Europe decreasing melanoma incidence with decreasing latitude has been seen.

Mortality rates from melanoma by sex for northern, central and southern Italy are given in Table 1; specification of the areas considered to constitute the north, centre and south are also given.

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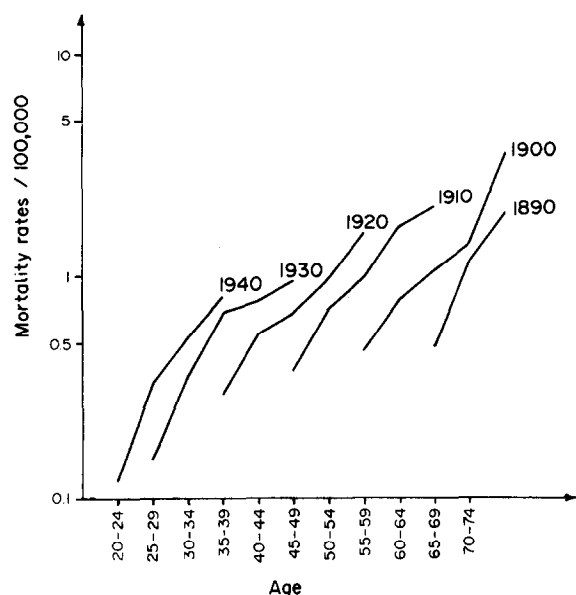


Fig. 2. Malignant melanoma mortality by birth cohorts in Italy for both sexes combined. Each line gives age-specific mortality rates for cohort born in the same 5-yr period (the first year of the period is indicated). Mortality rates on ordinates are expressed on a logarithmic scale.

The time trend of mortality is similar in the two sexes, even though the rates for males are higher than those for females. Mortality rates decrease proceeding from the north to the south for both males and females.

Unfortunately surveys on the accuracy and comparability of cancer death certification in the

different regions of Italy are not available, though it is assumed that this kind of bias may play a lesser role for neoplasia than for other causes of death.

In order to avoid bias due to the possible differences in the accuracy of diagnosis in older age groups, truncated mortality rates have been calculated (unpublished data). Bearing in mind that melanoma is extremely rare in childhood and early adult life, the data have been restricted to the age range 25–64 yr. The truncated mortality rates showed no striking differences from those for all ages, suggesting the reliability of the north–south mortality gradient. This unexpected trend of mortality with latitude in Italy is consistent with the reported gradient of incidence of melanoma in Europe [5], and we may suppose that in Italy, too, ethnic factors overwhelm the effect of increasing sun exposure at lower latitudes. The northern populations have, in fact, a lighter complexion and are probably more susceptible to the solar induction of melanoma [9]. Ad-hoc studies on the differences of complexion according to latitude have not been conducted; however, an ethnic heterogeneity between northern and southern Italy has been demonstrated by genetic studies [10]. Moreover, it is to be noted that northern Italy is the most industrialized area of the country, and chemicals which eventually may be significant in the aetiology of melanoma are certainly more widely present.

Table 1. Adjusted melanoma mortality rates (per 100,000) by sex for northern, central and southern Italy

Year	Males			Females		
	North*	Central†	South‡	North	Central	South
1972	1.09	1.22	0.40	0.86	0.81	0.19
1973	0.88	0.79	0.39	0.65	0.62	0.31
1974	0.90	0.67	0.37	0.73	0.65	0.24
1975	1.24	1.14	0.56	0.94	0.65	0.46
1976	1.19	1.09	0.62	1.19	0.93	0.51
1977	1.33	1.14	0.68	1.17	0.99	0.50
1978	1.34	1.03	0.74	1.04	0.96	0.45

\*North Italy, latitude: 44–47°. Population (1975): 25,631,908.

†Central Italy, latitude: 41–44°. Population (1975): 10,637,176.

‡South Italy, latitude: 36–41°. Population (1975): 19,565,303.

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