

## Diet and melanoma risk: effects of choice of hospital versus population controls

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### ABSTRACT

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**Aims and background.** Hospital-referred subjects are widely used as controls in studies on the relation between diet and cancer risk. However, concern has been raised about the potential for bias of such type of referents, and few studies seem to have examined their reliability in estimating dietary habits of the underlying general population.

**Methods.** In a northern Italian setting, the differences in dietary patterns between 41 individuals referred for non-neoplastic lesions to hospital surgical outpatient units and age- and sex-matched subjects drawn from the general population were examined. The effects of such differences when carrying out a case-control study on a neoplastic disease, cutaneous melanoma, were also analyzed. Dietary intake was assessed using the EPIC food frequency questionnaire.

**Results.** Population controls showed higher intakes of energy, animal proteins and animal fats compared with sex- and age-matched hospital controls, whereas intake of carbohydrates and fiber was comparable. An excess melanoma risk associated with intake of animal proteins and fats emerged when hospital controls were used as the referent group, whereas no such relation was detected when cases were compared to population controls.

**Conclusions.** The results suggest that hospital-referred subjects may not reflect dietary habits of the underlying general population and may be unsuitable for case-control studies concerning the relation between diet and cancer risk.

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**Key words:** case-control studies, diet, epidemiologic methods, melanoma.

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