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# Mediterranean diet, cancer, and cardiovascular risk in a network of Italian studies

Carlo La Vecchia

Department of Clinical Sciences and Community Health, Università degli Studi di Milano, Milan, Italy

**ADDRESS FOR CORRESPONDENCE:** Carlo La Vecchia, Department of Clinical Sciences and Community Health, Università degli Studi di Milano, Via Vanzetti 5, 20133 Milano, Italy, e-mail: [carlo.lavecchia@unimi.it](mailto:carlo.lavecchia@unimi.it)

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Various aspects of the Mediterranean diet and nutrition patterns are considered favourable on metabolic factors and cardiovascular disease, but also on several common neoplasms.

First, overweight and obesity have not been rising in several Mediterranean countries. In Italy over the last 15 years the prevalence of overweight has remained at around 30%, and that of obesity at 8% of the adult population. Nevertheless, overweight at various ages has been consistently associated not only to cardiovascular disease, but also to several common cancers, including colorectal, endometrial and post-menopausal breast cancer in Italy. Physical activity, in contrast, has been favourably related to colorectal, breast, and several other neoplasms in Italy, as well as to metabolic and vascular disease.

The Mediterranean diet score has been inversely related to the risk of diabetes and myocardial infarction, with a reduced relative risk of about 40% in the highest score category.

Several aspects of the traditional Mediterranean diet have also been related to cancer risk in a series of case-control studies conducted in Italy since the early 1980s on over 30,000 cases from 20 cancer sites, and a similar number of controls. For most epithelial cancers, and particularly for digestive tract cancers, the risk decreased with increasing vegetable and fruit consumption, with relative risks between 0.3 and 0.7 for the highest versus the lowest quantile level. A number of antioxidants and other micronutrients or food components (including carotenoids, lycopene, and flavonoids) showed an inverse relation with cancer risk, but the components responsible for the favourable effect of a diet rich

in vegetables and fruit remain undefined. Fish, and consequently a diet rich in n-3 fatty acids, as well as olive oil, also tended to be favourable diet indicators. In contrast, subjects reporting frequent red meat intake showed elevated risks for several common neoplasms. Wholegrain food (and hence fibre) intake was related to reduced risk of vascular diseases and several cancers, particularly of the upper digestive tract, but refined grain intake and, consequently, glycaemic load and glycaemic index were associated with increased risk of different types of cancers.

These findings are partly or largely in agreement with the results of several other case-control and cohort investigations. The impact of different dietary patterns in various populations will be discussed.

**Key words:** diet, cancer, cardiovascular risk.

## DISCLOSURE

The author reports no conflict of interest.