RISK FACTORS

EPIC risk: behind the smoke-screen

For over half a century it has been known that cigarette smoking increases the risk of lung cancer and, more recently, many other solid tumours, thereby posing a huge public health burden. Within the framework of the European Prospective Investigation into Cancer and Nutrition (EPIC), a working group was established to address the impact of tobacco smoking on cancer risk. In the EPIC study, Antonio Agudo and collaborators studied 14,563 (of 441,211) participants from the EPIC cohort who developed a tobacco-related cancer: the proportion of all tobacco-related cancers attributable to smoking was 35%.

The impact of smoking on cancer risk was assessed by means of the population attributable fraction, which measures the public health burden of a risk factor by estimating the proportion of cases of a disease that would not have occurred in the absence of exposure to this factor. About 1.5 million cancers were diagnosed in 2008 in eight European countries included in EPIC, almost half of which

were in localizations causally associated with smoking. The researchers found that about 270,000 new cases of cancer (almost one out of every five) diagnosed every year in these countries are directly attributable to cigarette smoking.

As Agudo explains, “hazards of cigarette smoking take several decades to become substantial and many previous studies reflected past smoking patterns. The EPIC study provides a unique setting to update the knowledge on the relationship between smoking and cancer, focusing on healthy subjects that included a relatively high proportion of young adults and women recruited during the 1990s.”

Agudo’s team plan to use the same database to assess the impact of smoking on mortality, by calculating the excess mortality among smokers, as well as the attributable survival time according to smoking habits. As Agudo notes, “in spite of substantial efforts to reduce smoking in European countries, the overwhelming importance of cigarette smoking on cancer risk is still of public health concern,

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and a priority from the point of view of prevention.”

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